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# The Accounting Review

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## QUALIFICATIONS FOR A PROFESSIONAL CAREER

EDWARD B. WILCOX

**B**EFORE I undertake to do what I can with my subject, I wish to make a few complaints. When I was asked for a paper on the qualifications for a professional career, the prescription did not say anything about accounting, but I assumed that was implied. Fears have since assailed me that perhaps I would be expected to cover the broad subject of qualifications for professions in general. As will shortly be seen, I know little enough about what it takes to make a successful accountant; but I know nothing at all about professional qualifications beyond that field. Many of them are undoubtedly the same; but I could not be sure. I am going to talk from a background of public accounting, and I hope that is in order. If it isn't, I am lost.

My next complaint is that the "helpful suggestion" which came along with the assigned topic proved to be entirely impractical. The hint was dropped that if I should lack ideas on the subject, I could "sit down and dream some up." I tried the sitting posture as recommended, and then I tried dreaming things up in all the various positions which my imperfect physical condition would permit. But nothing came of it. Being, with good cause, by this time in a bit of a panic, I tried to find what someone else had said on this subject, not so much for backing, as to have something to attack. But like Job who, in protesting his sincerity, said "My desire is . . . that

mine adversary had written a book," I looked in vain. I would be on firmer ground if I had an adversary and if he had written a book. I would know then how to proceed.

However, in the *Reader's Digest* for September, I found this gem telling about the Johnson O'Connor tests:

"Creative imagination is essential not only to writers but to salesmen, teachers, store managers, research workers—a score of others. It isn't essential—indeed may be a detriment—to foremen and accountants."

Then the article continued, "Other tests determine whether you have accounting aptitude—speed and accuracy in handling figures." After this there was some talk about finger dexterity, but I couldn't make out whether or not that was supposed to be useful to the accountant. Nevertheless, so far as it goes, this was just what I was looking for because it's all wrong. Some of the greatest wizards in handling figures—people who can add seven or eight columns at a glance—are utterly hopeless as accountants. And I would like to see a man deficient in creative imagination devise an accounting system or write a difficult report or unravel a defalcation or reach into the blue air and pull out the basis of a claim for relief from excess profits taxes under Section 722 of the Internal Revenue Code. Of course the Johnson O'Connor tests may refer to bookkeeping or detailed clerical

work, and the further down in the scale you go, the more nearly these excerpts I discovered approach the truth. But they offer nothing in determining the qualifications for a professional career in public accounting.

Another reference to the work of Dr. O'Connor appeared in an editorial in the May, 1940, number of the *Journal of Accountancy*. Here it was stated that the accountant scored above average in number memory and in analytical reasoning, but was about normal in creative imagination, in inductive reasoning, and observation. I find less to quarrel with in this statement, although I am only lukewarm about number memory. I distrust the accountant who relies on his memory of numbers, first because I can't do so, and second because, even though he makes few mistakes, those few are too many. But the main point is that these qualifications all relate to the spade work of accounting. The editorial in the *Journal* goes on to say, "While the importance of technical aptitude and technical training is obvious, one must not overlook the factors of physical attributes, personality, ideals, and temperament which are essential to success in professional work. We must not stress the 'environment' and forget the importance in 'heridity' in choosing men who will bring most credit to the profession. Tests should be designed to reveal the essential quality of the man as well as his aptitude for the technical tasks he will be required to perform."

I am a trifle amused at this last sentence because, desirable as are the tests called for, there is no suggestion as to how such qualities may be measured. Nevertheless this gets close to the heart of the problem. A capacity for a professional career in accounting has a relation to technical aptitude which is comparable to the relation of the genius of an artist to his skill with the brush or the chisel. The skill is essential,

but it won't carry him far in a professional career.

My dictionary tells me that a profession is a calling in which one professes to have acquired some special knowledge that is used either by way of instructing, guiding, or advising others or of serving them in some art. This is all right so far as it goes, but I think the essential thing about a profession is that the layman is not capable of judging the services rendered, because the special knowledge or skill of the professional man is beyond the power of the layman to evaluate. You can weigh the coal you buy, or measure the lumber, or test the motor; but you cannot tell, unless you are a doctor, whether your tonsils were well or poorly removed, or, unless you are a lawyer, whether or not the legal advice you have received is sound. Therefore the professional man may mislead or betray those who rely on him. The only protection they can have is in such standards of competence and integrity as are maintained by or on behalf of the profession.

The independent public accountant is a professional man in this sense. The management which he serves may form fairly competent opinions of his services, although there is a limit to this. But creditors and investors are generally without any basis for forming such opinions. They simply rely on a good reputation. Therefore we have standards of admission to the practice of accountancy, to the end that the incompetent and the unfit be excluded; and we have codes of ethics adopted and maintained by those admitted to such practice so that reliance may safely be placed on them. These standards and codes have only one justification, and that is that they are in the public interest. Whatever rewards, rights, privileges, and immunities flow from them are not for the benefit of members of the profession, but for the benefit of those who

rely on these members. The exclusive right to practice is not a combination in restraint of trade, or a device for raising fees, but a protection for the public against useless or harmful services. The benefits to members of the profession which follow from the exclusive right to practice are justifiable only because it is in the public interest that men of the highest qualifications should be attracted to callings which demand these qualifications if the professional men are to fulfill their purpose.

The impasse, then, in stating the qualifications for a professional career, arises from the fact that these qualifications are intangible and therefore incommensurable. We can measure tangible things, but they are not so important. We are like the drunken man who was looking for his watch on the ground under a street light because it was too dark to find it half a block away where he knew he had dropped it. This is nothing new to accountants. I believe we all know that the important things about a business are the sort of management and organization it has and the probable future of its products in the market. But we can't measure these things. So we measure the volume of sales and the costs and the profits. Those things are tangible, and although it is difficult to measure them and we are never accurate, we can do it well enough to justify such words as "fairly presents the result of operations." But we know that we are measuring, not the most important things, but the most measurable things. That is why the Securities and Exchange Commission has explained that financial statements constitute only one of the ingredients that go into the formation of an investor's opinion about the securities of a company. Similarly, when we consider qualifications for a professional career, we measure the skills and the aptitudes because we can; but we know that the most important qualifications are not detected

in this way. Any attempt even to define them leads to a discussion of such vague generalities as honesty, competence, temperament, ideals, and so forth. For any practical purpose this is a dead-end street.

One way to seek an easy key to the required qualifications is to say that any one who likes accounting must be fitted for it. I have heard this seriously urged, and it has some negative truth in it. Somewhere it is written that there are no uninteresting subjects but only disinterested persons. Certainly any one who doesn't like public accounting had better stay out of it; it is difficult, tiring, trying, worrisome, and it must be a terrible bore to the unloving. But I have seen too many enthusiastic misfits to believe that an interest in the subject is an indication of fitness. This, too, is a dead-end street.

I do not mean to say, however, that I cannot state the qualifications for a professional career in public accounting. I think I can. One has only to be an intellectual giant, adaptable, gifted with insight and imagination, the possessor of infinite knowledge, tact, diplomacy, courage, and a winning personality, an idealistic paragon of all the virtues, and a demon for work. Such a man has a good chance of success as an independent public accountant if he is content with relatively modest financial rewards. Whatever skills or aptitudes are required for the spade work of accounting he should have; but I know less of the tests for these than the psychologists, and I cheerfully leave that end of the subject to the experts. I can think of but few aptitudes or skills not useful to the accountant except highly developed manual dexterity, big muscles, and absolute pitch.

Admittedly the qualifications I have suggested as conducive to success in a professional career as an independent public accountant are a bit broad. Such a statement lacks the exclusiveness which brings

a category into focus. It is almost the equivalent of saying that there are no qualifications which particularly fit one for a professional career in accounting, and to an extent I believe that is true. There is room for greatness in public accounting, and great men have often displayed diverse talents. Leonardo da Vinci was a painter, a sculptor, and an engineer. Goethe was a poet, a scientist, and a statesman. Stephen Leacock and Lewis Carroll were both mathematicians and creative writers. Benjamin Franklin was a statesman, a scientist, a writer, and something of a philosopher. And for every great man who has become known for the diversity of his talents, there are thousands who have possessed capacities which they never had time to exploit, because they were too busy exercising others.

I trust I shall not be charged with too much glorification of my own field if I say that it is one of those which offer opportunities for the exercise of limitless talents, and that men possessing any approach to such talents can probably succeed to comparable degrees in accounting or in any of several other fields. But although these qualifications are widely, almost universally, useful, there are, I think, different aspects of them which apply more appropriately to specific fields. The qualifications for a professional career in public accounting cut across all or most of the broad basic qualifications for success in any highly developed calling.

Thus the intellectual stature qualifying a man for a career in public accounting may not be quite the same as that required for pure mathematics; yet the same capacity for close and cogent reasoning is essential to accountants and is characteristic of the best of them. It may differ from what is required of a scholar in Greek, and yet the closest approach to Greek in any other language that I can conceive is some of the stuff the account-

ant has to read and master. The dry fodder which scholars digest without falling asleep over it is matched by much of the difficult reading required of accountants. Both call for intelligence and interest, unstimulated by passion or suspense. And the accountant must have the intellectual capacity to understand and apply generalities to concrete cases, or to make appropriate exceptions, to meet and understand viewpoints other than his own, to value them, to go to the heart of a situation, and to discriminate between the essential and the trivial. Experienced public accountants know the importance of the distinction between men who know what they are doing, and men who don't.

The accountant need not be as adaptable as a chameleon; in fact, he had better wear his true colors at all times. But he does need to adapt himself to surroundings, to various working conditions and eating and sleeping places, and to different kinds of people. He needs to avoid stirring up prejudices, and he needs to talk the language of both the clerk and the chairman of the board. Even more he needs to adapt his auditing procedures to different accounting methods and systems of internal check; and he must be able to change his viewpoint to fit the changing and developing needs of the business world he serves. If his early training placed emphasis on balance sheets, he has already had to change his thinking to terms of income statements, and now he is in process of changing it again to production costs, taxation, and the wartime regulation of business. After the war he may have even greater adjustments to make, and the accountant whose habits and attitudes are too deeply imbedded in his early training will be an anachronism.

The accountant will not need the insight into hidden values of the spirit which is the genius of the artist; but he will need an insight into the true values with which

he deals so that their significance will not escape him, and he will need what is akin to insight, that subtle sixth sense which frequently tells an accountant that something is wrong before he knows what it is. He will not need the creative imagination which can produce poems or paintings; but he will need a similar kind of imagination which will enable him to create revealing financial statements or to set up procedures which produce needed results with a minimum of cost, or to do any of the things which have justified the conclusion that accounting, itself, is an art. He will not greatly need a knowledge of astronomy or ancient history, and when I said a while ago that he should be possessed of infinite knowledge, I exaggerated. He need not even be possessed of all the knowledge available to man. But he will find use for an astonishing lot of it. Mastery of auditing, accounting, and an adequate background of law is no small task. Include taxes and the job is multiplied, but even that is only the beginning. The public accountant should know economics and finance, insurance, manufacturing, and trade practices in many fields. He will find use for an understanding of the physical sciences, and even of the arts, geography, history, and literature. I remember that one of the earliest things I was ever told by a senior in the profession was that there was no scrap of knowledge or experience that would not, sooner or later, be useful to an accountant. His education is never finished.

It is probably true that an accountant will find scant use in his profession for the sort of tact and diplomacy required of a great lover or an ambassador to a world power; but tact and diplomacy of a sort might well have headed the list of qualifications. The accountant is the employee of his client, but he is also the arbiter and the interpreter among parties of opposing interests, serving debtor, creditor, man-

agement, investor, and the public, including its government as its regulator and tax collector. He needs something of the sympathetic understanding of a doctor, and something of the unyielding impartiality of a judge, and he must exercise these qualities effectively in dealing with an organization which hired him and which may cease to do so, and in which his coming occasions an inevitable measure of disturbance. The public accountant without tact and diplomacy will not long endure.

It is true that he is not apt to be called on for physical courage like that of a soldier or a stunt man in the movies; but he may face intimidation, and he certainly needs the courage of his convictions. There are many ways in which those convictions can be shaken, and there are many different kinds of threats, sometimes open but often subtle, which can tempt the accountant to deviate from his independent judgment, or make him afraid even to propose what he knows is right. Some men possess crude courage and others avoid giving offense; but the public accountant must be prepared to combine these traits if he is to realize any but the most meager rewards of his profession.

It is true that the public accountant is not expected to be an Adonis or a matinee idol or even as beloved by his countrymen as was Will Rogers, but the difficult role he has to play can be greatly facilitated if people like him. He comes as a nuisance and he recommends, opposes, and denies. All this causes friction, and the oil to minimize it is to be found in courtesy, friendliness, respect, and those intangibles of personality that cause people to be drawn to some but not to others. The accountant of the utmost ability will have little opportunity to serve in his profession if those with whom he comes in contact prefer his absence to his company.

Perhaps I exaggerated again when I said that the public accountant must be a

paragon of all the virtues. Of course I did. He need not give his all to the poor, nor refrain from lustful thoughts, but he must have an unassailable sense of ethics. In all the world there is no ethical requirement quite like that placed on the public accountant. He must be the judge of his employer in the interest of people he does not know, and he must take no profit from knowledge that comes to him in his confidential capacity. And in order that he maintain his prestige and independence, and uphold professional standards, he must eschew competition with others in his field. His path will be strewn with temptation, but his decision must always be to deserve his good name at any cost. Otherwise he lacks an essential qualification for a professional career in accounting.

The last item on my list was that the accountant must be a demon for work. There I did not exaggerate. Public accounting is no feet-on-the-desk job. It frequently means long hours and close, grueling application. It requires willingness to sacrifice personal time and even health to meet requirements of the work. It calls for willingness and ability to climb down off the pedestal of creative work, far-sighted decisions, and broad viewpoints, and do careful voluminous, detailed work. It requires the housewife's love of order, and a willingness to labor to achieve it. It requires the endless patience of an

animal trainer. It demands that sort of genius which is the capacity for taking infinite pains.

Now I know of no ready synthesis for the kind of qualifications I have been describing. Possibly some of them are measurable—I don't know—but I am sure many of them are not. I doubt that I have offered anything which will be of much use in determining in advance which persons are best qualified to embark on professional careers in public accounting. We face a difficulty which occurs in many fields; the closer we come to the heart of a problem, the further we appear to be from a solution. It seems then that we have lost ground. But this sense of loss is felt only because we have gained such knowledge as to realize that previously cherished beliefs must be abandoned, and there is little virtue or reward in the cherishing of false beliefs. I think that the greatest wisdom in seeking to discriminate between those who may be fitted for professional careers and those who may not lies in the realization that we can do so only by observing the extent to which they possess those broad and general qualifications which will fit them for outstanding success in almost any field. If, indeed, this is the best that we can do, then we are wiser for knowing it, even though the total of our knowledge of the subject is less than we used to think it was.

# TAXES AND EMPLOYMENT\*

HENRY B. FERNALD

**O**UR TWO major problems are, first, the winning of this war; second, the readjustment for peace.

As to the first, fighting and strategy are problems for military authorities; our home problem is primarily that of production. Money will not win this war if we do not have needed production. If we get production, we can and will find the money to pay for it; not entirely during the war, for even if we raise some few billions more of revenue in each of the remaining war years, we shall have an immense debt to be met from postwar taxes. This war can only be paid for if we keep alive our revenue sources of taxation without throttling, breaking, or discouraging them. We must have, during and after the war, the active flow of business, employment, profits, and income from which the government can derive its needed revenues. We need all we can raise from taxation, without hurting war production and without unduly sacrificing the future revenues which can only come from the profits and incomes of business and individuals. In speaking of war production, we necessarily include the production needed to maintain as best we can civilian life from the surplus over direct war needs.

As to the second major problem, our greatest concern is that the millions who will return from the war services and the millions who will have to shift from wartime jobs shall have fair opportunity for employment in business activities. They do not want hand-outs or doles, but places in industry where they can stand on their own feet and earn on their merits. That is what we must give to our returning service

men and women if they are to feel we have not fallen down on our jobs while they were doing theirs.

But employment means employers. To have employers in private industry under a system of individual initiative, employers must have the expectation of a reasonable return commensurate with their investments of capital, their abilities and efforts, and the risks involved.

Anyone who contemplates employing others in business must look ahead and estimate the probability that in the long run he can recover from sales income all he will spend for salaries and wages, materials and supplies, and other charges and expenses of the business, that he can keep his capital intact or be able to compensate for losses, and have a net profit remaining, after taxes, sufficient to warrant the capital employed, the risks involved, and the abilities and efforts expended. Unless he can see a reasonable prospect of doing these things, there is no inducement for him to give employment. He certainly cannot ask others to contribute finances unless there is a prospect for reasonable returns on the capital employed. If he uses his own money on any other basis, he will probably not long be in a position to give employment.

The net yield is to be measured by what remains to the investor after taxes. Whether the investment is in a corporation or a partnership or an individually-owned enterprise, the net result is the figure after all tax payments, corporation or individual. Large earnings by a corporation mean little unless we look at the net return to the investor after all taxes—those paid by the corporation and those paid or payable by the individual when and as the profits may be distributable to him. If the corpo-

\* Adapted from testimony given before the Ways and Means Committee of the House of Representatives, October 12, 1943. Tables and illustrative computations have been omitted.

ration can earn 10 or 20 per cent, but the investor can see a possible return to him of only 2 or 3 per cent net after taxes, the prospective investment will have little appeal to him. Whether corporate earnings are absorbed by losses and expenses or are taken by taxes, they will in either case disappear so far as net yield to the investor is concerned.

Too little attention has been given to the burden of taxes as a factor in obstructing employment, business enterprise and development, and government revenues themselves.

It is not possible to get the investment money needed to form and develop the new enterprises we must have, and to reconstitute existing enterprises, from the stockholders or from investors whose income would be only in the lower tax brackets. Yet under present tax rates, we virtually bar from investment the funds of those in the higher tax brackets because they could not hope to obtain net returns which would cover the risks involved.

Think what this will mean in respect to employment. Think also what it will mean to government revenues, if those in the higher income brackets have no incentive for making incomes which will be subject to tax and will yield government revenues.

Consider what this will mean to the young men, some of them returning from war service, who want to go in, as their fathers or grandfathers may have done, to try, perhaps with little capital but much energy, determination, hard work, and ability, to build up a business and to give employment to others. If such young men, looking ahead, see that if they are successful in developing a business, there is no possibility under the tax laws for them ever to get any net returns commensurate with the energy, ability and risk required, we cannot expect them to try to do this. Unless we can have this continued inflow of new energy and ability into business en-

terprises, we shall see our whole industrial system die of dry rot. We cannot look for it to be maintained solely by existing enterprises, and we would not want to see this done if we could expect it.

I believe not merely that present tax rates threaten business enterprise, but I also believe they pass the point of productivity to the government. I do not believe that in the long run any increase in tax rates on \$10,000 or more of individual income will yield additional revenues to the government; rather, I think that in the interests of revenue alone there should be reduction in the higher rates.

It is not solely the question of revenues for this year or next. It is the long-run revenues that we must depend upon to pay for this war.

Secretary Morgenthau made reference (page 7 of Hearings, Unrevised) to an estimated \$11 billions which corporations will have added to their capital out of earnings during the three years 1941, 1942, and 1943. Mr. Paul submitted (page 103 of Hearings, Unrevised) a table "Net income, income taxes and dividends of Corporation returns, 1936-1944" ALL RETURNS, which shows the basis for these estimates. (Another table giving somewhat different figures appears on p. 128, but that on p. 103 seems later, and so it is used.) This table shows as Item 13, "Net Income Retained after Taxes and after Net Dividends Paid."

|                                     | (In Millions) |
|-------------------------------------|---------------|
| 1941 actual                         | \$ 2,478      |
| 1942 estimated                      | 4,000         |
| 1943 estimated                      | 4,550         |
| Total net income retained 1941-1943 | \$11,028      |

This same table shows the results for prior years:

|  |          |
|--|----------|
| 1936 actual                              | -\$800   |
| 1937 actual                              | -960     |
| 1938 actual                              | -1,742   |
| 1939 actual                              | 199      |
| 1940 actual                              | 587      |
| Net Impairment for 5 years,<br>1936-1940 | -\$2,716 |

|  |          |
|--|----------|
| If to this net impairment for the years 1936 to 1940   | —\$2,716 |
| We add algebraically the net retained for 1941   | 2,478    |
| the net result for the six years 1936 through 1941 is net impairment of surplus for all corporations | —\$238   |

This showing of net impairment for the six years for which actual figures are given is quite different from an estimated eleven billion dollar surplus retained for the three years 1941, 1942, and 1943.

In any event, the statistical figures for estimated additions to capital out of earnings do not represent liquid cash resources. Many corporations, under government urge or demand, have vastly increased their working and plant assets, using all surplus accumulations and often all they could borrow to do so. Such assets are not now, and may not become in the postwar period, promptly available cash for postwar requirements, and there is no assurance that such accumulations will ever be distributable to stockholders.

Of course, average figures do not reflect the situation of individual enterprises. Some undoubtedly will have accumulated funds available for postwar needs of reconstruction and reemployment and to meet postwar losses. Others, probably the majority of corporations, will not have the surplus funds available. We cannot hope to provide needed postwar reemployment unless business corporations can readily obtain new investment money.

It is estimated that on the average it requires \$5,000 of investment in industry to give employment to one man. Unless we can open the doors for business investment, we cannot hope to provide work for the millions of people that will need employment after this war. Present tax rates seem rather effectively to close most doors to business investment.

In this connection, there is the problem

of deferred expenditures for maintenance, upkeep, and development. With shortage of materials, labor, and machinery, there is a general situation of under-maintenance of plant and equipment. Repairs which would normally be currently made are being deferred. This is unavoidable. If money not spent today could be held to be spent in the future when men and materials are available, it would help to give employment later. The trouble is that under our tax laws there seems no provision for deduction for deferred maintenance. If maintenance and repairs are kept up to date, the money spent is deductible in computing taxable income, but the unspent dollars are not deductible. They are treated in effect as taxable income, and the government takes 40 to 90 per cent of them. When the government takes 90 per cent of the dollars not spent this year, those moneys are not available for future use to make good the accumulated under-maintenance and to give desired employment.

This situation as to under-maintenance of plant and equipment is general in industry. A similar situation exists as to under-development of mines in which it is impossible today to keep the development up to date to insure continued operation, and the ten cents of each unspent dollar left to the taxpayer will not enable the needed work to be done later when it will be possible to do so. Some adequate allowance should be made for deferred maintenance, upkeep, and development if we are to be able to do the needed work when material and labor become available.

A table submitted by Mr. Paul (page 21 of Hearings, Unrevised) gives the estimated distribution, by income classes, for income payments as defined by the Department of Commerce. This was submitted as bearing particularly on the inflation question. It shows on its face that its figures are not those for estimates of

taxable net income of taxpayers in the various classes, yet some discussions of taxation seem to have ignored this distinction. In the higher brackets particularly, taxable net income after allowable deductions would undoubtedly be substantially less than the total "income payments" there shown. It is probable that the net income figures, if available, would show that there is little if any additional revenue to be obtained in the higher income brackets. Secretary Morgenthau and Mr. Paul, I believe, have stated that the only available source for substantial additional revenues is the incomes in the lower brackets. This is true regardless of the form and nature of taxes which may be imposed. I have already expressed the belief that the taxes in the higher brackets have passed the point of highest productivity, and that additional revenue should come from a decrease rather than an increase in those rates. In saying this I am quite conscious of the greatly increased tax load which has now been placed on lower incomes that for so many years were not paying direct income taxes, although they did bear a substantial load of indirect taxation. I am not urging that additional burdens be placed on those taxpayers; but I am agreeing with the Treasury that the lower incomes constitute the only source from which substantial additional reve-

nues can come, although the Treasury does not seem to have made its recommendations in accordance with its convictions in this regard.

Present income tax rates make almost impossible any hope that we shall have the business investments which will be needed to give necessary employment and to produce long-term government revenues. Under our system of private initiative, ample employment and government revenues can only come if our tax laws allow to employer and investor opportunity for a net yield after taxes which will be commensurate with the capital employed, the risk assumed, and the ability and energy given.

Most important of all is the bearing of this picture upon postwar employment. This needs to be considered now. We cannot afford to wait until the war is over and then start in to recast our tax laws so that they will not obstruct investment and employment. We should immediately remedy those provisions of our law which now have effects that are detrimental to postwar employment. We should frame as promptly as possible the tax laws which will apply when hostilities cease, so that business enterprises and investors can make their plans and be ready, as soon as the war is over, to meet as fully as they can the tremendous postwar employment problem.

# SIMPLIFICATION OF FEDERAL TAX ADMINISTRATION

WILLIAM A. PATON

THE *Certified Public Accountant* for June, 1923, contained a short paper which I prepared entitled "Simplification of Federal Income Taxation." The first three sentences read as follows:

"It may fairly be urged that our present system of Federal income taxation is unduly complex. At any rate, little in the way of simplification has thus far been accomplished by revision. Each successive act has been more elaborate than its predecessor, and the maze of administrative technicalities surrounding the taxpayer has been steadily thickening."

This was more than twenty years ago, and I was naive enough at that time to believe that we had about reached the endurable limit in elaboration and complication. But when one makes even a casual study today of the labyrinth of our present tax structure it is easy to see that the process of overdevelopment had only begun in 1923.

Possibly the ultimate degree of baffling complexity and top-heaviness has not yet been reached, but there are some signs that we are nearing the end of this particular road. Certainly a radical overhauling of the tax system is long overdue, and is particularly needed as one feature of effective planning for the postwar era.

It is perhaps not necessary to say that in discussing Federal tax administration I am going to restrict my remarks to taxes on income and profits. On the other hand I shall take the liberty of including in the concept of "administration" the basic structure of the law, as well as its technical application by the Treasury. In other words, my definition of simplification of administration comprehends all changes in both the underlying scheme and its operation which will promote more equitable

and less costly collection of the funds necessary to meet government expenditures.

We are all more or less reconciled to the prospect of a relatively large Federal budget in the years ahead. No one expects that taxes will be greatly reduced immediately even if and when the happy day comes which sees the free spenders kicked out of the seats of authority. But the burden of taxes is not to be described merely in terms of the amount of money collected. The total burden includes the cost of compliance on the part of the taxpayers and the administrative costs incurred by the government. In constructing a system of taxation a serious effort should be made to minimize this additional burden; the taxpayer should be separated from his money with the least possible bedeviling, harassment, and expense. The system we have, however, could hardly be worse if deliberately designed to maximize the direct and indirect cost of compliance, and to produce gross inequities to boot. No one is in a position to estimate in dollars the amount of the annual burden which represents a total loss to our national economy in the form of excessive compliance cost, but that this unnecessary load is a serious matter can not be questioned. It should be remembered that the cost of compliance in a broad sense is not confined to the actual expenditures made by taxpayers, in addition to the tax, which are associated with the process of meeting tax obligations; it includes the effects of the absorption and misdirection of otherwise productive effort, of the sapping of economic vitality and incentive.

The basic weakness in the present tax

structure—the feature from which most of the specific complications and inequities flow—is found in the adoption therein of the concept of the business corporation as an entity properly subject to taxation. There is wide agreement among students of public finance on this point. The entity on which taxes must inevitably fall is the natural person, and the manner in which taxes are levied should take account of this fundamental consideration. The corporation is basically nothing more than an organization or institution acting as a steward in handling the resources of a group of investor-members, and the income of the corporation is basically the income of such members. (In saying this I am not losing sight of the fact that there is plenty of room for argument as to what are the proper criteria of realization and the proper occasions for assessment and collection of taxes on such income.) This point of view was clearly recognized in the early revenue acts. In the statute of October 3, 1913, the list of deductions provided included “the amount received as dividends upon the stock or from the net earnings of any corporation . . . which is taxable upon its net income,” and with respect to corporations the act states “that the normal tax hereinbefore imposed upon individuals likewise shall be levied . . . upon the entire net income.” The act of 1916 likewise provided for a tax on corporation net income restricted to the rate of the normal tax on personal income, and dividends received are treated as a “credit” for the purpose of the normal tax in the personal return. The early statutes, in other words, did not set up a tax on corporations as an independent entity, but rather used the corporation as a withholding agent for the purpose of collecting the normal rate of personal tax on the distributive equities of the members in the corporate income stream.

As time went on, however, the idea grew

on our politicians that the corporation constituted a taxable entity in its own right—and an entity which not only had no vote but had a bad name and could safely be pushed around—and we find the normal tax on the individual and the so-called normal tax on the corporation parting company. And finally the development proceeded to the point at which the corporation is subject to a distinct system of differential taxes, and dividends received are subject to tax as an element of personal income without regard to the fact that such dividends are drawn from a balance available to shareholders after the income stream involved has once been passed through the door of taxable income.

There are three first-class reasons for abolishing all income and profits taxes on corporations as such. In the first place, such taxes create serious inequities, in that they subject the income stream accruing to shareholders as a class to extraordinary burdens not faced by other groups in our economic society, and take no account of the varying circumstances of the shareholders themselves. Second, such taxes are an obstacle to business development and full employment—matters which are always important and which will be of vital significance after the war. A whole book could be written on this point. To put it briefly, a tax system which penalizes our most effective institutional mechanism for the carrying on of large-scale production, and which saps the very lifeblood of investment by punitive levies on that section of total income which is most likely to be available for the renewal and expansion of business capital, is one of the major impediments to maintaining and expanding the levels of economic activity. The business mule won't be able to do the plowing for long if his rations are cut down to the point where he is too weak even to kick. In the third place, the use

of the dual system of taxing income earned through the corporate form of organization adds greatly to the complexity of the structure and hence to the total cost to the nation of financing the functions of government. No basis for even a general estimate is available, but if the levies on the corporation as such—including the nightmarish excess-profits tax—were eliminated the total direct and indirect compliance and collection cost per dollar received by the Treasury would certainly be reduced very substantially. With the elimination of these taxes a long list of complications—aside from the maze of technicalities associated with the excess-profits tax—would go by the board. As has often been pointed out by tax experts, a large proportion of the troublesome problems of tax accounting and administration arise out of the relation of stockholder and corporation under the dual system of taxation. Take, for example, the controversial questions of stock dividends, stock rights, and excessive accumulation of surplus; these questions could readily be resolved once the position was taken that the corporation in itself is not a taxable entity.

It must be understood, of course, that in advocating the elimination of the corporation income and profits taxes I am not suggesting that the total tax bill—the total cost of running this very ambitious government of ours—should be thereby reduced. It would be a fine thing if we could secure the essential services of government for a lot less money, but that's another question. It follows that if changes of the character indicated were made, important adjustments would be required in the structure of the personal income tax to insure the maintenance of an adequate flow of funds to the Treasury. And let me add here that I am not one of those who believe in minimizing taxes in financing government expenditures. Quite the contrary, I do believe in the careful evalu-

ation of government services, and the minimizing of the cost of those services which the nation deems essential, but once the volume of expenditure has been determined the sound method of raising the money is taxation. Borrowing from current income leaves a lot of repercussions for the future; taxation mows a clean swath and concludes the entire transaction currently. Both of these methods are of course infinitely superior to selling bonds to the banks, which is simply a variation of the old device of printing paper money.

There are two main alternative methods of moving from the corporation to the shareholder as a focus of income taxation. In the first place, the structure of the tax on natural persons might be left substantially as at present, except for changes in rates, exemptions, etc., and treatment of capital gains as ordinary income. That is, the stream of corporate income might be subjected to tax only when actually received by the stockholder in the form of dividends, or upon redemption of shares by the company, or transfer of shares to another party by sale or otherwise. Some people tend to see red when this type of proposal is made, but it is not without merit. In a broad sense corporate profit accrues to the stockholder-beneficiary when earned by the business organization in which funds are invested, but there is much to be said for the proposition that such income becomes realized and available for personal expenditure only when disbursed to the shareholder in cash or its equivalent.

It is true that this scheme might permit the corporate steward to accumulate wealth for the individual stockholder over a long period of years without passage through the door of taxable income. But is this a serious matter so long as not a single dollar of this wealth is made available as actual purchasing power to the beneficiary? If the stockholder sells his

stock at an amount in excess of the cost, he is subject to tax on the difference in the year of disposition. To take care of the situation in which the stockholder either gives his shares away or dies before disposing of them, the law might provide (as has been suggested by Professor Simons of the University of Chicago) that the excess of fair market value, at date of gift or decease, over cost be treated as ordinary income for tax purposes.

This approach, however, presents further difficulties. The owner of shares which had substantially increased in value as a result of retained profits might borrow thereon, and thus obtain purchasing power with which to expand his standard of living with no charge other than the interest on the loan. Moreover, there might be a considerable advantage to a particular individual in postponing taxation of the undistributed earnings attaching to his shares as a result of the opportunity to compound such earnings—although the application of the surtax to a large margin realized through sale of or other disposition of shares might more than offset this advantage. In any event, the total tax burden would vary among individuals, depending upon their general position and the policy of the corporation in distributing and retaining earnings. There is also the point that collections by the government might be somewhat irregular from year to year under this system, although it is not at all obvious that in the long run this would be important, and it must not be forgotten that with sharply fluctuating corporate earnings collections based directly on such earnings are bound to vary from year to year. The really serious objection is the purely practical one that postponing taxation of determined corporate income until distribution or realization by disposition of shares would have the appearance of favoring—and would actually favor in some measure—

stockholders as a group as compared with partners and individual owners of income-producing property. We are thoroughly accustomed to a system under which accruing income is subject to tax, even if such income has been reinvested or become reembodyed in nonliquid assets, or has never been available in liquid form, up to the date of assessment. It is hardly practicable to abandon the taxation of an important section of accruing income—corporate profits—through taxes upon the corporate entity, without the introduction of some method of taxing such accruals to the shareholders in their individual capacities.

This brings us to the second main alternative—the treatment of the corporation as a partnership for income tax purposes. This, I believe, is the only truly equitable and practicable solution. In brief the proposal is to tax the individual shareholders of all corporations from year to year on their distributive equities in periodic corporate income *earned since the date of acquisition of the shares*. I have advocated this approach on a number of occasions in the past, and am more than ever convinced that it is thoroughly sound and workable. At first thought the plan may appear to be unduly novel and a move toward greater complexity rather than simplification, but upon close examination it is found to be neither strange nor involved. There are several hundred thousand business partnerships in this country—to say nothing of single proprietorships—and many of these represent substantial and continuing business enterprises, with most of the basic problems of operating management and financial administration found in the corporate field. In the case of all these organizations, since the advent of the modern program of income taxation only information returns have been required, and the total income accrued from year to year—whether retained in the busi-

ness or disbursed—has been subject to tax in terms of the returns of the beneficiaries therein. And there has been no talk of undue complexity or inequity, and no complaints from partners as a class. Instead we find a widespread feeling that this method of taxation favors business activity carried on under the partnership plan as compared with such activity carried on through the corporate form, and there is considerable evidence that incorporation of small businesses has been checked, and that some movement toward conversion of small corporations to partnerships has been fostered, by the one-sided character of our tax structure. In other words, we have had a long background of experience, at least in the field of the smaller type of business enterprise, with taxation of business income as it accrues to the beneficiaries.

If it be argued that the distributive shares of stockholders cannot be readily and reliably determined for inclusion in individual tax returns, an adequate rejoinder is at hand. No insurmountable difficulty has been encountered in reporting in individual returns the accrued business income earned by partnerships and single proprietorships, despite the fact that accounting for income is generally less well developed in this area than in the field of corporate enterprise. Further, the existing tax structure has required all along the periodic determination of the income of every business corporation (ignoring the unimportant matter of exempt companies) and the levying of taxes on such income in total. If, then, the total can be determined periodically for tax purposes it is obvious that such total can be assigned to the beneficiaries for tax purposes. In the case of many companies, indeed, it is regular practice to report earnings per share, and it would be a desirable development if this practice became universal. It may also be noted that the present tax structure requires the ascertaining by the

taxpayer of the extent to which dividends received have been paid out of capital—e.g., in wasting enterprises—and this requires active coöperation on the part of the corporation.

It cannot be successfully urged that the proposed system would multiply the number of individual returns required or add to the complexity of such returns. With the present low exemptions, virtually all stockholders, in companies of all sizes, must file returns, and there is no more complexity in the reporting of a distributive share than in the reporting of dividends received. For stockholders who buy or sell in the year prorating would be necessary, but this would be hardly more troublesome than compiling a record of dividends received.

On the score of equity, the taxation of distributive shares to individual shareholders as opposed to the taxation of the total to an artificial corporate being is ideal; it is the only procedure under which the income accruing to every shareholder can be taxed at the progressive rates fixed in the statute. The plan has another important feature so far as equity is concerned. One of the serious objections to the present structure lies in the fact that dividends received constitute taxable income to the extent that they were appropriated from surplus, regardless of the date at which the particular stockholder acquired his shares. If, for example, a stockholder bought a share of stock at \$75 per share, and a dividend of \$25 was declared thereon the next day, appropriated from past earnings, the entire amount of the dividend must be reported as taxable income, subject to normal and surtax rates, although it is beyond dispute that so far as this stockholder is concerned the dividend is a return of capital invested and does not involve a dime's worth of income. With the levy shifted from dividends received to distributive shares earned since acquisition, all such inequitable treat-

ments would disappear. The only technical rule required would be use of the familiar assumptions that dividends are appropriated from the most recent profits, and second that all dividends received which were appropriated from earnings prior to acquisition of shares are treated as decreasing the cost (or other basis) of the shares.

In the large corporation, it is true, the individual stockholder has less direct influence upon profit distribution than the typical partner in the business firm. However, it is noticeable that greater irregularity of disbursement of profit funds is found among the smaller business units, both incorporated and unincorporated, than in the case of large companies whose shares are widely owned. A shift to the taxation of distributive shares might require some modification of dividend policy, but it is hard to foresee any developments from such a change that would be harmful. If the result proved to be a more regular and complete distribution of profits than we find now there would be no reason for alarm. Many feel that with respect to the vital question of what shall be done with corporate profit funds it is entirely proper for the shareholders to have a more effective voice than they have had in the past. A liberal dividend policy, coupled with a convenient means of reinvesting dividends, may well be viewed as good corporate policy for the typical situation. If the stockholder chooses to retain profit funds to meet taxes and other personal expenditures that should be his privilege.

Incidentally, I should like to point out that there is a vast difference between a penalty tax on corporations measured by undistributed profits and the taxation of distributive shares *rather than dividends* to the shareholders in accordance with their individual circumstances. The former type of tax makes it well-nigh imperative that profit funds be disbursed regardless of the

circumstances; the latter type of tax leaves the administration of profit funds primarily in the hands of the corporation and its shareholders—where it belongs.

A possible compromise would be to tax distributive shares in lieu of taxation of corporate income as such in the case of all small companies with, for example, from one to one hundred shareholders, and to grant the privilege in the case of all other corporations which secured the consent of their stockholders to such procedure. The great majority of the 400,000 to 500,000 active business corporations in this country are small organizations, differing from the typical partnership or single proprietorship mainly in the fact of incorporation. The large companies, with long lists of stockholders, probably comprise less than two per cent of the total. Accordingly, so far as numbers go, the dual system of taxation of corporate income might be largely eliminated by extending the long-standing treatment of partnerships to all business units which are essentially incorporated business firms. This could be construed as no great departure from the present structure, in principle, particularly in view of the permissive taxation of distributive shares of "personal-service" companies which was in effect for several years. I would much prefer to go the whole distance, but such a compromise would be a step in the right direction and might be expedient from a political point of view.

Shifting the focus of taxes on corporate income to distributive shares would not necessarily require collection in full from the stockholder. It might be desirable to utilize the corporation as a withholding or collecting agent to the extent of the lowest rate of the schedule of taxes on individual incomes. Partnerships, it may be noted, might be similarly treated.

In the foregoing pages I have dealt at some length with what seems to me to be

the basic defect in the existing tax structure—a defect which is so serious that not much can be accomplished by tinkering here and there so long as this fundamental complexity and inequity remains. There are, of course, a long list of complications and distortions which should be eliminated. Many of these difficulties, I believe, arise from the gradual introduction into the law and regulations of features originally designed to favor some particular group, close some real or fancied loophole, or promote greater equity in the handling of particular situations or types of income. What is needed in this area is a somewhat more practical and realistic point of view. Income in modern society arises under a great variety of conditions and accrues to persons in a great variety of circumstances. Income is generally an estimate, at least in its net aspect; the line between income accretion and income utilization—production and consumption—is shadowy; income often arises in other forms than money; nominal increase in income may not measure a genuine increase in purchasing power or permit of a higher standard of living. In the face of all these fundamental difficulties, income taxation at the best is bound to be a very crude thing, achieving reasonableness and equity in only the roughest sense. Indeed, I believe that there is considerable justification for the view that the search for nice adjustments beyond a certain point—and particularly in view of the fact that politicians play a decisive part—will actually produce more confusion and inequity than it remedies, in addition to adding frightfully to the complications and the cost of administration. As I like to put it, in such a field you may be able to do a better job with a meat ax than with a scalpel.

Consider, for example, the mess represented by the special provisions through the years for dealing with so-called capital gains

and losses. The underlying idea back of this development was the view that a capital gain is a questionable kind of income and should be treated in a special manner—some thought more severely than ordinary income and others argued for less severity. The idea is not without merit. In a period of rapidly advancing prices the apparent gain on the sale of realty, stocks, or other property may be fictitious in whole or in part in the sense that it does not measure an increase in the purchasing power of the vendor. To illustrate from personal experience, I once bought a house for \$5,000 and sold it a few years later for \$7,500—one of my biggest deals. I paid taxes on the \$2,500 difference. But in the period from purchase to sale the general price level had advanced considerably more than fifty per cent, and my \$7,500 would buy less generally in the year of sale than my \$5,000 would purchase in the year of acquisition. In other words, I lost money and still had to pay income taxes.

Of course income taxes ideally should be levied in proportion to true increases in purchasing power. But this is quite impracticable at the present stage of our development, statistically and otherwise. And the same problem attaches to income determination all along the line; it may stand out more sharply in long-term transactions but it is only a matter of degree.

Even if it be granted that segregation of capital gains and losses for tax purposes has some slight justification, the treatment accorded these items by our politicians and pseudo-experts through recent years has been such as to warrant abandonment of the whole program. Aside from the absurd complications involved there has been the tendency to curtail the possibility of deducting losses almost to the vanishing point—a serious matter through a period in which losses have predominated for the average individual. It seems reasonable to conclude that both simplification and

equity would be served by treatment of capital gains as ordinary income and recognition of losses as deductions without any limitation.

A less serious complication which attempts to recognize a special qualitative type of income is the earned-income credit. As now set up this feature is nothing more than an arbitrary technicality which has no vestige of equity or reasonableness. Moreover, I doubt whether any effort—however carefully worked out—to separate the “earned” from the “unearned” can be justified from either a theoretic or a practical point of view. Certainly no one has suggested an adequate set of tests which will serve to winnow out the real earners from those who are merely exploiting their fellow citizens.

Another desirable step—of some importance from the standpoint of simplification—would be to get rid of virtually all special exemptions and exclusions. The outstanding case of exempt income, of course, is interest on governmental obligations. This exemption—and most of the others—has no substantial justification. Mention may also be made here of the special elections and options with which the tax structure is cluttered; much of this underbrush should be cleared away.

An example of a technical complication which is entirely indefensible is found in the “wash sale” provision. This represents a rather futile attempt in a special area to penalize a taxpayer because his conduct may be influenced by tax considerations. As a matter of fact, there is no good reason why a taxpayer shouldn’t be influenced by taxation, an important part of his environment, although a tax system should be drafted in such manner as to interfere as little as possible with established business practices and types of transactions. And if a taxpayer holds a security which is worth less than he paid for it and realizes a loss through a bona fide sale, is there any

justification for making deductibility contingent upon what he does with his money thereafter? I see none.

Among other technical complications of very dubious propriety are the provisions concerned with “discovery value” of wasting assets and “involuntary conversion.” The person who discovers a valuable mine is no more deserving of special consideration taxwise than the inventor who owns a valuable patent. And a profit realized through casualty or governmental seizure is still a profit.

The technical framework of the individual tax is badly in need of simplification in another direction. Admitting that the tax burden should be increased sharply with the size of incomes it is hard to see any excuse for the variety of devices employed to favor small as compared with large incomes. Why not a clear-cut graduated tax with no distinction between “normal” and “surtax” and no special arrangement of credits and other trimmings?

The discussion of special nuisance features of the present tax structure might be greatly extended, but the foregoing comments will serve to give some concrete flavor to the point of view I am trying to emphasize. I realize that incomes arise under a great variety of circumstances and that any adequately equitable tax program must include many technical distinctions and rules. But I wish tax legislators and Treasury experts would remember that complexity is not a virtue in itself and that it is quite possible to carry elaboration to a point which impairs the practical operation of the program and gives rise to more inequity than it cures.

Thus far I have said nothing about administration in the narrower sense of the manner in which the Treasury and its representatives endeavor to give effect to the existing tax program. This is a still more painful subject, and there is no need of telling any group of accountants that

such administration is far from satisfactory. I have said many times that I believe the relation between the Treasury and its taxpaying clientele has deteriorated rather than improved during the last twenty-five years, and if this is the fact it is a most unfortunate state of affairs. Assuming that I am right, where is the fault and how can it be remedied? One possible answer is that the American taxpayer is an exceptionally ornery and recalcitrant chap who can't get accustomed to income taxes and can't make up his mind to coöperate effectively with kindly Uncle Sam. I don't believe that this explanation has much merit. The lion's share of the blame, it seems to me, rests with the government. The ill-advised squeeze plays which the Treasury adopted a few years back with respect to depreciation and other deductions, excessive accumulation of surplus, etc.—launched in the atmosphere of general acceptance of the idea that taxpayers as a class and particularly businessmen taxpayers were not entitled to much consideration—rapidly weakened taxpayer morale. Add to this the widespread use by Treasury staff of overbearing tactics, approaching in many cases a none-too-polite system of blackmail, and it is no wonder that taxpayers have become less coöperative and that the burden of compliance cost has been rising.

This condition is serious, and can be remedied only by the development—from the top down—of more sane and discriminating administrative policies. The Treasury and its staff must get over the idea that the making of a host of additional assessments constitutes effective operation. The Treasury should view the taxpayer as a client rather than as an opponent who should be butted about. And

above all the government must learn that in the case of a business organization that has an acceptable accounting system, and is periodically audited by a responsible public accountant, the presumption is that the calculations of income made by the business and its representatives are fair and reasonable, and that the Treasury will raise just as much money in the long run if it permits the accounting system to control the incidence of revenues and charges in particular periods of time. I agree with Col. Montgomery in the view that all the fuss and fury which the Treasury has applied to the determination and redetermination of allowable depreciation through the years has probably resulted in the collection of less revenue to date than would have been received had the taxpayer been allowed to write off plant cost in accordance with his own desires.

A few days ago I mentioned to a layman friend that I was scheduled to make a few remarks about simplification of Federal taxation. He suggested that at any rate a complex tax structure should be a bonanza for accountants. The outsider often looks at it that way. Actually, accountants as a class are in the front rank of those who are thw sworn enemies of needless complexity and hampering red tape in the field of economic activity, just as doctors are in the front rank of those who are trying to eradicate disease and promote public health. This thought leads me to offer—in conclusion—a new definition of a profession: *it is a field of human endeavor which if developed to the fullest extent in the interest of society will end by substantially eliminating itself from the list of necessary productive functions.* But please don't be unduly worried; there is still plenty of hard work ahead of you.

# APPLICATION OF FUNDS MADE PRACTICAL

HIRAM T. SCOVILL

**T**HIS is a plea for the preservation of the application-of-funds idea as an important integral part of an auditor's report, and a plea for the adoption of a form of presentation of "application-of-funds data" which will assist materially in such preservation.

Too frequently in the past the application-of-funds statement, if used by the auditor, has been included as a schedule or exhibit in the back part of the report. In too many cases also, the main application-of-funds statement has been supported by a working-capital schedule, which served as a catch-all for items that seemed difficult to classify and which served no especially useful purpose not covered by a comparative balance sheet. As a result of such type of presentation, the application-of-funds statement has been growing less and less significant to the executive and has been practically ignored by many in the process of examining an auditor's report, even when the report contained such a statement.

The application-of-funds idea, however, is too valuable to have its real existence jeopardized by an unfortunate selection of form and location in the auditor's report. We would reduce the whole application-of-funds statement, including the working-capital appendage, to a brief summary occupying 10 to 20 lines in the body of the auditor's report, sometimes called "Comments." The principles presented herein have been used annually since 1930 in the CPA Problems course at the University of Illinois, and have been used later by alumni who tried them out with marked success in audit reports.

The main purpose of an application-of-funds statement or summary is to answer

a type of question regarding the financial status and operating results which is not answered by the balance sheet or operating statement. The question thus frequently asked by an executive is of this type: "Since we made \$50,000 last year, why is it that we have less cash on hand and have more notes outstanding at the bank than we did a year ago?" In another case it might be: "Since we lost \$50,000 during the year (according to the auditor's report) how does it happen that we do not owe as much to trade creditors or to the bank as we did a year ago?"

In view of the purpose as stated, the application-of-funds summary in the body of an auditor's report should begin with the net profit result as shown in the operating statement. Such profit should then be increased by non-cash debits and decreased by non-cash credits to profit and loss in order to derive an amount which represents the amount of funds made available from profits of the year (after paying the expenses incurred in deriving the profits) that may be used in acquiring additional assets or reducing liabilities (other than those acquired or incurred in the regular turnover of "merchandise—to receivables—to cash—to payables for merchandise").

It should be understood that an application-of-funds summary is supposed to reveal what happened in the course of a year or other specific period covered by the data. If, for example, there is a decrease of \$10,000 in accounts receivable at the close of the year, compared with the beginning, it means that \$10,000 has been collected from sales of a prior period in addition to an amount representing sales of the current period. The fact that the net profit is used as one of the sources of funds is evi-

dence that the sales of the current year are treated as producing funds to the full extent of such sales, subject to diminution by the amount of funds used in meeting expenses.

Funds of a corporation, in so far as they need to be reflected in an application-of-funds summary are ordinarily derived from three sources and used for three purposes, viz.:

*Provided from*

1. Net profits of current period
2. Sale or conversion of assets of prior periods
3. Use of credit, including sale of capital stock

*Applied to*

1. Increasing assets
2. Payment of liabilities of prior periods
3. Payment of dividends

Some writers in dealing with the application-of-funds statement have tried to rationalize to the extent of assuming a definition of the word "fund" similar to that used in governmental or institutional accounting. For the application-of-funds summary, if the best purposes are to be served, the word "fund" should be used as practically synonymous with "cash." By "practically" we mean that an application-of-funds summary does not have to be as accurate as a statement of cash receipts and disbursements. It can be in units of \$100 if it is to serve its most useful purpose and it can ignore or merge minor

items. In fact, the application-of-funds summary (or statement) could be compiled by summarizing the items of cash receipts and disbursements for a year, omitting, of course, those thousands of items which represent collections (directly or through accounts receivable) from sales, and payments (directly or through accounts payable) for expenses of all sorts including materials used. The effects of such thousands of items are reflected in the net profit figure. Obviously the preparation of such a summary from the cash records of a corporation would be most impracticable. The results thereof can be approximated by the negative approach which consists in comparing the balance-sheet items of the beginning and end of the period under consideration. This is the starting point for all application-of-funds summaries. Some of the differences between the two sets of figures can be used directly in the application-of-funds summary, whereas others will require analysis to determine what unusual, or non-cash, transactions have affected the accounts during the period.

To illustrate the close relationship between the negative approach (comparison of balance-sheet items and brief analyses thereof) with the positive approach (summarizing entries from cash records) the following situation is presented.

*Comparative Balance Sheet Items*

|                           | <i>Beginning<br/>of Period</i> | <i>End of<br/>Period</i> | <i>Increase<br/>(or Decrease)</i> |
|---------------------------|--------------------------------|--------------------------|-----------------------------------|
| Cash.....                 | \$ 10,000                      | \$ 35,000                | \$25,000 (1) A*                   |
| Receivables.....          | 50,000                         | 65,000                   | 15,000 (2) P                      |
| Inventory.....            | 20,000                         | 30,000                   | 10,000 (3) A                      |
| Equipment.....            | 100,000                        | 100,000                  |                                   |
|                           | <hr/> 180,000                  | <hr/> 230,000            | <hr/> 50,000                      |
| Payables.....             | 40,000                         | 60,000                   | 20,000 (4) P                      |
| Depreciation Reserve..... |                                | 10,000                   | 10,000 (5) P                      |
| Capital Stock.....        | 140,000                        | 140,000                  |                                   |
| Surplus.....              |                                | 20,000                   | 20,000 (6) P                      |
|                           | <hr/> \$180,000                | <hr/> \$230,000          | <hr/> \$50,000                    |

*Application-of-Funds Summary Prepared from  
Increase (or Decrease) Column*

*Funds were provided by:*

|   |                |        |            |                 |
|---|----------------|--------|------------|-----------------|
| 1. Net profit per books.....  |                |        |            | \$20,000 (6)    |
| Add non-cash expenses:  |                |        |            |                 |
| Depreciation.....   | \$10,000 (5)   |        |            |                 |
| Purchases used but not paid for during the year (\$20,000-\$10,000 Inventory)             | 10,000 (4) (3) | 20,000 |            |                 |
|   |                |        | 40,000     |                 |
| Deduct non-cash credits:  |                |        |            |                 |
| Sales credited to profit and loss for which collections were not made during the year.... |                |        | 15,000 (2) |                 |
| Funds derived from operations during the year after meeting costs of operation.....       |                |        | 25,000     |                 |
| 2. Sale or conversion of assets.....  |                |        | none       |                 |
| 3. Use of credit.....   |                |        | none       |                 |
| Total funds provided during the year.....   |                |        |            | <u>\$25,000</u> |

*Funds applied to:*

|  |  |  |            |                 |
|--|--|--|------------|-----------------|
| 1. Increasing assets   |  |  |            |                 |
| Cash balance increased and made available for use next year..... |  |  | 25,000 (1) |                 |
| 2. Payment of liabilities.....                                   |  |  | none       |                 |
| 3. Payment of dividends.....                                     |  |  | none       |                 |
| Total funds applied.....   |  |  |            | <u>\$25,000</u> |

\* The numbers after the amounts in the Increase (or Decrease) column refer to the items similarly numbered in the application-of-funds summary. The letters "A" and "P" indicate the section of the summary to which the items are transferred as "Applied" or "Provided."

If one is preparing an application-of-funds summary from data supplied, as in a problem, one must always assume that for any account whose balance is available the transactions affecting it during the year are of the most usual type for that account unless analyses are given which reveal unusual ones. If one has access to the general ledger, in more practical situations, one should examine the accounts which are most likely to have unusual types of entries such as appraisal of land, surplus adjustments, bond-discount trans-

actions, goodwill evaluation, adjustments between fixed assets and depreciation reserves, and similar non-cash items.

All the accounts contributing to the balance-sheet items presented above are reproduced here for analysis and also for use in comparing the application-of-funds summary above with one prepared in the more positive but impractical procedure from the cash book.<sup>1</sup>

<sup>1</sup> The numbers in the accounts are cross references to indicate the related debits and credits. They bear no relation to the numbers in the list of balance-sheet items above.

| Cost of Sales       |         |               |         | P. & L.             |         |               |         |
|---------------------|---------|---------------|---------|---------------------|---------|---------------|---------|
| Invty. at beginning | 20,000  | Invty. at end | 30,000  | C. of S. (3)        | 290,000 | Sales (2)     | 400,000 |
| Purchases (1)       | 300,000 | P. & L. (3)   | 290,000 | Expenses            |         |               |         |
|                     | 320,000 |               | 320,000 | Cash (7)            | 80,000  |               |         |
| Invty.              | 30,000  |               |         | Deprec. (4)         | 10,000  |               |         |
|                     |         |               |         | Net to surplus (8)  | 20,000  |               |         |
|                     |         |               |         |                     | 400,000 |               | 400,000 |
| Accounts Payable    |         |               |         | Accounts Receivable |         |               |         |
| Pd. cash (6)        | 280,000 | Balance       | 40,000  | Balance             | 50,000  | Cash col. (5) | 385,000 |
| Balance             | 60,000  | Purchases (1) | 300,000 | Sales (2)           | 400,000 | Balance       | 65,000  |
|                     | 340,000 |               | 340,000 |                     | 450,000 |               | 450,000 |
|                     |         | Balance       | 60,000  | Balance             | 65,000  |               |         |

| Equipment |            |
|-----------|------------|
| Balance   | 100,000    |
| Surplus   |            |
|           | (8) 20,000 |

| Reserve for Depreciation |         |             |         |
|--------------------------|---------|-------------|---------|
|                          |         | Deprec. (4) | 10,000  |
| Cash                     |         |             |         |
| Balance                  | 10,000  | Pd. (6)     | 280,000 |
| Rec'd (5)                | 385,000 | Pd. (7)     | 80,000  |
|                          |         | Balance     | 35,000  |
|                          | 395,000 |             | 395,000 |
| Balance                  | 35,000  |             |         |

The cash book for the year in question would have produced the following summary, judging from the items in the ledger that are marked as coming from the cash book.

| Received  |                  | Disbursed            |                  |
|-----------|------------------|----------------------|------------------|
| Customers | \$385,000        | Creditors            | \$280,000        |
|           |                  | Expenses             | 80,000           |
|           |                  | Balance to next year | 25,000           |
|           | <u>\$385,000</u> |                      | <u>\$385,000</u> |

This shows that the entries for cash received and disbursed during the year arose from transactions having a direct bearing on the profit and loss results, and not from transactions with real estate, bond issues, bank loans, capital-stock issues, or dividends. In other words, it supports the terminology and procedure used in the application-of-funds summary to the effect that \$25,000 in funds was derived from operations, which \$25,000 was made available to the succeeding year. The preparation of a summary from the entries in the cash book in a case of this sort would take a prohibitive amount of time, however, whereas the preparation from the items in the increase or decrease columns of a comparative list of balance-sheet items takes only a few minutes. After one has assured himself that the same results can be derived by either method, one would always select the method which utilizes the balance-sheet items. Such assurance is readily obtained from a scrutiny of the accounts

and a testing of some of the items. In the Accounts Receivable account, for example, the closing balance is \$15,000 larger than the opening balance. Recognizing that the only other items normally appearing in the account are sales and collections, one knows immediately that the sales must have been \$15,000 greater than the collections of the year. This indicates that the profit and loss account containing the credit for sales shows an income (contributing to the net-profit result) that is \$15,000 greater than the funds provided from such income. Hence there is a non-cash credit of \$15,000 in the profit and loss account which must be subtracted from the profit in order to derive the amount of funds that was made available from the sales transactions. Some writers in dealing with applications-of-funds statements are inconsistent in that they add non-cash debits to the net-profit result but do not deduct any non-cash credits.

If accounts receivable showed a decrease of \$15,000, that amount would be placed in the funds-provided part of the summary in the section designated as "Sale or Conversion of Assets." This would mean that collections had been made during the year to the full extent of the sales and that \$15,000 additional had been collected from customers.

The following problem<sup>2</sup> and solution present a practical application of the principles presented above.

<sup>2</sup> A slight modification of a problem in the examination of the American Institute of Accountants, May, 1928.

## The Accounting Review

| <i>Assets</i>                              | <i>12/31/42</i>       | <i>12/31/41</i>       | <i>Increase</i>       | <i>Decrease</i>     |   |
|--|-----------------------|-----------------------|-----------------------|---------------------|---|
| Cash.....                                  | \$ 300,000.00         | \$ 170,000.00         | \$ 130,000.00         |                     | AI                                      |
| Certificate of Deposit.....                | 200,000.00            |                       | 200,000.00            |                     | AI                                      |
| Marketable Securities.....                 | 220,000.00            | 100,000.00            | 120,000.00            |                     | AI Contra (2)                           |
| Customers' Notes & Accts. Rec....          | 300,000.00            | 250,000.00            | 50,000.00             |                     | PI                                      |
| Inventories.....                           | 160,000.00            | 100,000.00            | 60,000.00             |                     | AI                                      |
| Investment in Affiliated Co.....           | 180,000.00            | 200,000.00            |                       | 20,000.00           | PII                                     |
| Cash & Securities in S. F.....             |                       | 70,000.00             |                       | 70,000.00           | AII                                     |
| Deposit on Acct. of New Construction.....  | 140,000.00            |                       | 140,000.00            |                     | AI                                      |
| Plant & Equipment.....                     | 2,000,000.00          | 1,400,000.00          | 600,000.00            |                     | AI                                      |
| Goodwill.....                              |                       | 200,000.00            |                       | 200,000.00          | Contra (1)                              |
| Discount on Funded Debt.....               | 50,000.00             | 20,000.00             | 30,000.00             |                     | PIII                                    |
|  |                       |                       |                       |                     | Contra (4)                              |
|  | <u>3,550,000.00</u>   | <u>2,510,000.00</u>   | <u>1,330,000.00</u>   | <u>290,000.00</u>   | Contra (5)                              |
| <i>Liabilities &amp; Capital</i>           |                       |                       |                       |                     |   |
| Accounts Payable.....                      | 200,000.00            | 150,000.00            | 50,000.00             |                     | PI                                      |
| Purchase Money Obligations.....            |                       | 120,000.00            |                       | 120,000.00          | AII                                     |
| Interest, Payroll and Taxes Accrued.....   | 40,000.00             | 20,000.00             | 20,000.00             |                     | PI                                      |
| Reserve for Depreciation.....              | 600,000.00            | 400,000.00            | 200,000.00            |                     | PI                                      |
| First Mtg. 6% Bonds.....                   |                       | 350,000.00            |                       | 350,000.00          | AII                                     |
| Serial Gold Notes.....                     | 1,000,000.00          |                       | 1,000,000.00          |                     | PIII Contra (5)                         |
| Premium on Stock Sold.....                 | 170,000.00            |                       | 170,000.00            |                     | PIII                                    |
| Capital Stock.....                         | 1,000,000.00          | 800,000.00            | 200,000.00            |                     | PIII Contra (3)                         |
| Earned Surplus.....                        | 540,000.00            | 670,000.00            |                       | 130,000.00          | Analysis                                |
|  | <u>\$3,550,000.00</u> | <u>\$2,510,000.00</u> | <u>\$1,640,000.00</u> | <u>\$600,000.00</u> |   |
| <i>Surplus Analysis</i>                    |                       |                       |                       |                     |   |
| Balance—Jan. 1 1942.....                   | \$ 670,000.00         |                       |                       |                     | Less:                                   |
| Net Income for year ended 12/31/42.....    | 200,000.00            | PI                    |                       |                     | Dividends, cash \$ 90,000 AIII          |
| Appreciation of Marketable Securities..... | 70,000.00             | Contra (2)            |                       |                     | Dividends, stock 90,000 Contra (3)      |
|  |                       |                       |                       |                     | Goodwill written off 200,000 Contra (1) |
|  |                       |                       |                       |                     | Discount on Bonds 20,000 Contra (4)     |
|  | <u>940,000.00</u>     |                       |                       |                     |   |
|  |                       |                       |                       |                     | 400,000.00                              |
|  |                       |                       |                       |                     | Balance 12/31/42..... \$ 540,000.00     |

The abbreviations AI, PII, etc., represent the author's procedure in preparing the items for insertion in the application-of-funds summary. AI, for example, means Section I of the applied part of the summary.

## Solution for Academic Purposes

|   |                |                   |            |                       |
|---|----------------|-------------------|------------|-----------------------|
| <i>Funds Provided from:</i>   |                |                   |            |                       |
| I. Operating net profit for the year.....   |                |                   |            | \$ 200,000.00         |
| Add non-cash charges:   |                |                   |            |                       |
| Depreciation.....   |                | \$200,000.00      |            |                       |
| Interest, Payroll & Taxes Accrued.....  |                | 20,000.00         |            |                       |
| Mdse. purchased but not paid for.....   |                | 50,000.00         |            | 270,000.00            |
|   |                |                   |            | <u>470,000.00</u>     |
| Less non-cash credits:  |                |                   |            |                       |
| Sales not collected during year.....  |                |                   |            | 50,000.00             |
|   |                |                   |            | <u>420,000.00</u>     |
| Funds made available from operations.....   |                |                   |            | 420,000.00            |
| II. Sale or Conversion of Assets  |                |                   |            |                       |
| Investments in Affiliated Companies.....  |                |                   |            | 20,000.00             |
| III. Use of Credit, including Sales of Capital Stock                                      |                |                   |            |                       |
| Sale of serial gold notes, net.....   | \$1,000,000.00 |                   |            |                       |
| Less discount.....  | 50,000.00      |                   | 950,000.00 |                       |
|   |                |                   |            | <u>200,000.00</u>     |
| Increase in Capital Stock.....  |                | 200,000.00        |            |                       |
| Less Stock Dividend.....  |                | 90,000.00         |            |                       |
|   |                | <u>110,000.00</u> |            |                       |
| Premium.....  |                | 170,000.00        | 280,000.00 | 1,230,000.00          |
| Total funds available during year for purposes other than meeting operating expenses..... |                |                   |            | <u>\$1,670,000.00</u> |

*Funds Applied to:***I. Increasing Assets**

|   |               |              |
|---|---------------|--------------|
| Addition to Plant & Equipment.....              | \$600,000.00  |              |
| Deposit on account of new construction.....     | 140,000.00    |              |
| Increasing Inventories.....                     | 60,000.00     |              |
| Certificates of Deposit.....                    | 200,000.00    |              |
| Purchase of Marketable Securities.....          | \$ 120,000.00 |              |
| Less appreciation.....                          | 70,000.00     | 50,000.00    |
| Increase of cash balance for use next year..... | 130,000.00    | 1,180,000.00 |

**II. Payment of Liabilities**

|   |            |            |
|---|------------|------------|
| Redemption of First Mtg. 6% Bonds.....        | 350,000.00 |            |
| Less Sinking Fund used.....                   | 70,000.00  | 280,000.00 |
| Redemption of Purchase Money Obligations..... | 120,000.00 | 400,000.00 |

**III. Payment of Dividends.....**

90,000.00

Total funds applied during the year for purposes other than meeting operating expenses. .... \$1,670,000.00

The solution bears the designation "for academic purposes" so as to call attention to the fact that the summary one would use in the body of an audit report to a client would be more condensed, and the phraseology might be slightly less technical. In this case the one presented to the client would consist of 15 items, exclusive of the two totals. The principal modification would be in the first section, which would read:

|  |               |
|--|---------------|
| "Operating net profit for the year....   | \$200,000.00  |
| Add non-cash charges, such as<br>\$200,000 depreciation, and deduct<br>incomes not realized..... | 220,000.00    |
| Funds available from operations after<br>meeting operating expenses.....                         | \$420,000.00" |

Details of the non-cash debits and non-cash credits should not be shown.

Similarly in Section PIII, only the \$950,000 and \$280,000 items would be shown without details but with modified description such as "Sale of \$1,000,000 par serial gold notes at 95." In sections AI and AII the description would be changed slightly so as to permit of showing only the net amounts of \$50,000 and \$280,000, respectively, without analyses.

Such a condensed summary of the cash transactions of the year would be highly informative to the average executive and should be included in the text of the audit report. Its brevity in this form would in-

vite reading. There is no question but that it contains information not obtainable from the balance sheet or the profit and loss statement. It is one of the most valuable financial summaries that can be produced. It approximates very closely the results one would obtained by a classification and summarization of cash-book items, but it can be prepared in a very short time from two balance sheets and relevant analyses of unusual items. The cumbersome, and sometimes meaningless and unobserved, working-capital schedule is unnecessary.

**Procedure.** The foregoing solution was prepared from the increase and decrease columns and Surplus Analysis of the problem, after the placing of appropriate symbols, in accordance with the following general principles.

**Cash.** The increase of \$130,000 is placed directly in the solution as a fund applied to the increasing of assets (available for use the next year). As previously implied, the cash transactions of the year have left \$130,000 more cash at the end than there was at the beginning. Apparently the funds derived from all sources, as shown in the provided section, were sufficient to meet all other disbursements shown in the applied section and leave \$130,000 for use the following year. If there had been a decrease in cash, such difference would have

been shown in the provided section under "sale or conversion of assets." In this sense it would mean that the funds provided from all other sources were inadequate to the needs of the current year, necessitating the conversion of some of the previous year's cash balance to this year's use.

*Certificate of Deposit.* The increase of \$200,000 obviously is the direct result of investing \$200,000 net during the year in certificates of deposit. It is true that a cash-book analysis might show say \$300,000 invested in such certificates and \$100,000 redeemed. The two items would be brought together in the net figure, however, because for the purpose of this statement such details ordinarily add little information of value.

*Marketable Securities.* There was a net increase of \$120,000 during the year in the marketable securities. Under the "most usual type of transaction" theory so necessary in preparing a summary known as "Application of Funds," such increase would mean that \$120,000 had been spent in acquiring securities during the year. One finds from the Surplus Analysis in the problem, however, that an unusual or non-cash entry affected the Marketable Securities account of the year. This is called to attention by the "Contra (2)" in the third line of the problem. It seems that \$70,000 appreciation of marketable securities was recorded during the year, apparently by a debit to the asset account and a credit to Surplus. Accordingly, the \$120,000 is reduced by the \$70,000 in Section I of the applied part of the statement, leaving only \$50,000 to represent the cash disbursed for such securities during the year.

*Customers' Notes and Accounts Receivable.* The problem shows the notes and accounts in one item. This is entirely proper. It represents a combination that

should be effected in any problem if the notes are receivable from customers, as they usually are. The average commercial or industrial concern does not receive notes because of money loaned to others. It receives them in reduction of accounts receivable or in direct satisfaction of a sale. For this reason any increases and decreases in accounts receivable and notes receivable, from customers, can be merged into a single amount for treatment in the application-of-funds summary.

The \$50,000 net increase in this case is entered as a non-cash credit in the first section of the funds-provided part of the summary. It reduces the book profit by that amount in order to reflect the amount of such profit that provided funds for use during the year. This principle is covered in connection with the \$15,000 increase in Receivables on page (23) herein.

*Inventories.* There are two ways of handling an increase in inventories. One is illustrated in the simple \$10,000 case on page (22) and the other in the \$60,000 increase now before us. In the former case the increase in inventories was correlated with the increase in payables with the general idea that the increase in payables represents obligations incurred near the end of the period and that the additional inventory over that of the previous year is represented by the most recent purchases. This line of reasoning results in showing a \$10,000 increase in inventories subtracted from a \$20,000 increase in payables to give a net \$10,000 increase in payables incurred for expenses or merchandise entering into the net-profit figure as a charge against sales. In other words, under the first-mentioned method \$10,000 increase in inventories is assumed to have required no funds but merely to have resulted from a debit to inventories and a credit to accounts payable.

The method used in the problem now

under consideration is based on the assumption that there is no necessary relationship between increase in inventories and increase in accounts payable. It recognizes that the increase in inventories might not be represented physically by the goods most recently acquired (and hence probably not paid for). Under the assumption used in treating increase in inventories in this problem, the \$60,000 required the use of funds. Accordingly, that amount is shown in the summary as funds applied to increasing assets.

*Investment in Affiliated Companies.* The \$20,000 decrease in securities is a simple case of providing funds from the sale of such investments. It is so treated in the solution.

*Cash and Securities in Sinking Fund.* Since the application-of-funds statement or summary deals with general cash and not with specifically earmarked cash, increases or decreases in a sinking-fund cash balance are treated just as if they related to a sinking-fund investment balance. A sinking-fund balance of any type, then, is assumed to be available for its generally accepted purpose. In this instance it is only natural to believe that its main purpose is to redeem the 6% mortgage bonds, because there is nothing else in the balance sheets presented which could seem to justify the existence of a sinking fund. The solution, therefore, shows the \$70,000 decrease in sinking fund as reducing the amount of cash needed to redeem the first mortgage 6% bonds. The decrease in the latter is \$350,000, but under the conditions just mentioned only \$280,000 would be applied from the general cash fund toward such redemption.

*Deposit on Account of New Construction, and of Plant and Equipment.* These two items are similar, representing specific application of funds in the respective amounts of \$140,000 and \$600,000. The

deposit apparently represents the creation of an earmarked fund from the general cash fund.

*Goodwill.* The decrease of \$200,000 in goodwill during the year seems to be explained rather definitely by the corresponding item in Surplus Analysis designated as Contra (1). It is apparent that no funds were provided or applied in this case in effecting a debit to Surplus and a credit to Goodwill.

*Discount on Funded Debt.* It is generally recognized that a discount of any sort tends to reduce the amount of cash involved in a transaction. Little difficulty would be encountered in this situation in relating a discount increase of any reasonable amount to the \$1,000,000 in serial gold notes which obviously were issued during the year. The discount account here, however, shows an increase of \$30,000 which, when reviewed along with the Surplus Analysis, is found to be the net result of an increase of \$50,000, marked as PIII and Contra (5), and a decrease of \$20,000, marked as Contra (4). Apparently a journal entry not affecting cash was made crediting \$20,000 to Discount on Funded Debt and debiting Surplus. It had no effect on funds. This left \$50,000 entered during the year under review as the discount on the new \$1,000,000 issue. This probability is reflected in the solution by the net amount of \$950,000 shown as derived from sale of serial gold notes.

*Accounts Payable.* One or two possible theories which might affect one's conclusions on accounts payable were presented under the theory used and discussed for the \$60,000 increase in inventories. It is assumed that the increase in accounts payable represents obligations incurred for expenses or merchandise that are reflected as debits in the profit and loss net result of \$200,000. If this amount of profit was derived for the year after charging the

Profit and Loss account and crediting Accounts Payable with \$50,000, the profit before making such entry of non-cash character must have been \$250,000. It is considered, therefore, that this \$50,000 increase in accounts payable measures the amount of a non-cash debit to profit and loss. For this reason the amount is added to the profit as a non-cash debit along with depreciation.

The justification for assuming that a \$50,000 increase in accounts payable measures the amount of a non-cash debit to profit and loss is revealed in the following account.

## Accounts Payable

|                      |                  |                                       |                  |
|----------------------|------------------|---------------------------------------|------------------|
| Jan.-Dec. 1942 Cash  | 800,000          | Dec. 31 1941 Balance                  | 150,000          |
| Dec. 31 1942 Balance | 200,000          | Jan.-Dec. 1942 Purchases and expenses | 850,000          |
|                      | <u>1,000,000</u> |                                       | <u>1,000,000</u> |

The \$50,000 in the problem and in the solution was derived as the difference between the opening balance of \$150,000 and the closing balance of \$200,000. It could have been derived by a much longer process (at least in a practical case) by subtracting the total debits, \$800,000 from the total credits, \$850,000, entered during the year. Under the "most usual type of entry" theory, then, the difference between the credit and the debit entries, respectively, for the year represents the difference between \$850,000, the amount charged to profit and loss, through purchases or expenses accounts, and the amount paid in cash (\$800,000) for such purchases and expenses. Regardless of the

amounts inserted as debits and credits for the year in the account above, the difference between the two would be \$50,000 if the difference between the opening and closing balance remained at \$50,000. For this reason an increase in the balance of an accounts payable account, in the absence of any supplementary modifying data, can always be taken to indicate a non-cash debit, unless a specific amount of such increase is assumed to apply to an increase in inventories as previously discussed.

*Purchase Money Obligations.* There seems to have been no special adjustment during the year in the account "Purchase

Money Obligations." A decrease, therefore, would indicate rather conclusively that funds were applied to the extent of \$120,000 in reducing the liability of that type.

*Interest, Payroll, and Taxes Accrued.* An increase of \$20,000 in an accrued liability bearing a title such as accrued interest, accrued payroll, or accrued taxes denotes that a non-cash debit of that amount has been made to Profit and Loss account, in excess of amounts charged during the year as interest, payroll, or taxes paid. An analysis of a typical account such as Taxes Accrued, for example, presents a situation similar to that described for Accounts Payable.

## Taxes Accrued

|                      |               |                                 |               |
|----------------------|---------------|---------------------------------|---------------|
| Jan.-Dec. 1942 Cash  | 40,000        | Jan. 1 1942 Balance             | 20,000        |
| Dec. 31 1942 Balance | 40,000        | Jan.-Dec. 1942 To Taxes account | 60,000        |
|                      | <u>80,000</u> | 12 × \$5,000                    | <u>80,000</u> |

The balances of \$20,000 and \$40,000, respectively, in this Taxes Accrued account fit the conditions of the problem now under consideration. The credit of \$60,000 and the debit of \$40,000 represent the summation of transactions assumed as having taken place during the year. Regardless of the amounts assumed, however, or regardless of what one might find in a practical case as the total amount of the debit entries made during the year, such amount would of necessity be \$20,000 less than the total amount of the credits entered during the year, if the balance of the account at the end of the year was \$20,000 greater than at the beginning.

In the illustration it appears that entries in the aggregate amount of \$60,000 were made during the year debiting Profit and Loss (through Taxes account) and credit-

balance. Thus, the increase in the balance of an accrued liability account always measures the amount of the non-cash debit in the expense account related thereto, if no unusual types of transactions are reflected in the account during the period.

If the accrued liability in any given case should show a decrease in the balance at the end of the year compared with the beginning, the amount of such decrease would be shown in the application-of-funds summary as funds applied to the payment of accrued liabilities in excess of those set up as accruals during the year by debits to Profit and Loss through appropriate expense accounts. For example, if a Taxes Accrued item in a given situation shows \$25,000 decrease, the account would reflect in principle the following relationships.

## Taxes Accrued

|                      |                |                                 |                |
|----------------------|----------------|---------------------------------|----------------|
| Jan.-Dec. 1942 Cash  | 85,000         | Jan. 1 1942 Balance             | 45,000         |
| Dec. 31 1942 Balance | 20,000         | Jan.-Dec. 1942 To Taxes account |                |
|                      |                | 12×\$5,000                      | 60,000         |
|                      | <u>105,000</u> |                                 | <u>105,000</u> |

ing Taxes Accrued. This \$60,000 would naturally cause the net profit for the year to be \$60,000 less than if no entry had been made for taxes. But \$40,000 was paid for taxes during the year, as shown by the account. So if one is thinking in terms of the amount of charges made to Profit and Loss which are not measurable by cash disbursements, one would recognize that \$20,000 of the \$60,000 was of that type. In converting the book profit to a cash profit, therefore, one would merely add to the book profit the \$20,000 in so far as taxes are concerned. The same conclusions and procedures would be in order, regardless of the aggregate amounts of the debits and credits made during the year in the Taxes Accrued account, if the closing balance was \$20,000 greater than the opening

In analyzing this account, it can readily be observed that \$60,000 represents the charge to Taxes account, and ultimately to Profit and Loss, but that \$85,000 was paid out for taxes. This would be treated in a solution as indicating the payment of \$25,000 more than the \$60,000 charged to Profit and Loss and reflected in the solution in the net-profit result. Such \$25,000 is treated as paying for a liability incurred beyond the \$60,000 included in the operating results of the current year.

*Reserve for Depreciation.* Depreciation is the most common and probably the most easily recognizable of all non-cash charges. Any profit and loss result that is derived after entering depreciation on the records is smaller than it would have been had no depreciation been recorded. In trying to

obtain a profit figure, therefore, that would portray as nearly as possible the amount of funds made available from the whole turnover of the profit-making activities of a business for a year, one would naturally first add the annual depreciation charge to the book profit. The increase shown in the Reserve for Depreciation account measures the amount of depreciation charged to Profit and Loss account for the period, but only if no debits were made to the account during the year and no unusual credits were recorded. The account should always be inspected in a practical case for entries in the Reserve account which do not represent offsets to the depreciation expense charges. Problems should always state the amount of any debit entries or any unusual credit entries. In the case at hand the \$200,000 increase in Reserve for Depreciation is shown as a non-cash charge in the first section of the funds-provided part of the summary.

*First Mortgage 6% Bonds.* The decrease of \$350,000 in liability on bonds obviously was caused by paying off the bonds that appeared in the balance sheet of December 31, 1941, since the supplementary data do not reveal any unusual transaction as affecting the account. If the bonds were redeemed at a discount or premium such fact should be disclosed in a problem; it would be easily available in any existing set of accounting records.

*Serial Gold Notes.* An increase of \$1,000,000 in an account of this type leads naturally to the conclusion that funds to that extent must have been provided by the sale of such securities, unless a notation in the problem or evidence in the accounting records reveals otherwise. In this problem the Contra (5) shows a relationship between the \$50,000 Discount on Funded Debt and the \$1,000,000 serial gold note issue. This is discussed under "Discount on Funded Debt" earlier in this analysis.

The solution, therefore, shows \$950,000 as funds provided from the use of credit.

*Premium on Stock Sold.* Since capital stock issues with par or stated value are usually carried in the balance sheet at such values, any premium or discount is naturally shown separately. Here \$170,000 is shown as premium that has arisen during the year. The amount of such premium, therefore, is added to the funds derived from the sale of the stock based on par or stated value in order to derive an amount that will reveal accurately the total proceeds of the sale.

*Capital Stock.* Ordinarily an increase of \$200,000 in the Capital Stock account would indicate that \$200,000 par or stated value of stock had been issued, if no unissued-capital-stock account were carried on the records. Such a conclusion, however, would not bring into the picture the amount or nature of the proceeds derived from such issue. If no data are available to direct one's thinking on the matter, the assumption must be that the stock was sold for cash at par (or stated value). In the present case, Contra (3) reveals that \$90,000 of the new issue was for a stock dividend. This leaves \$110,000 as the par or stated value issued for cash. Consideration of the Premium on Stock Sold as discussed in the preceding section brings out the fact that the total of funds derived from the issuance of stock in this case is \$280,000 (\$110,000 par plus \$170,000 premium).

*Earned Surplus.* Since the starting point of an Application-of-Funds summary is the net profit for the year, it is obvious that Earned Surplus increase or decrease must always be analysed to find the net-profit figure and other items that affect analyses of other accounts. In this problem all but two of the items in the Surplus Analysis have been used in modifying other figures for use in the summary. These two are Net Income and Cash Dividends,

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which are marked PI and AIII respectively to indicate their positions in the summary.

After all items have been placed in the Application-of-Funds summary as described in the foregoing paragraphs, the total of funds provided equals the total of funds applied.

Deviations from items appearing in this sample problem and its solution can usually be taken care of by applying the principles established in the preceding

pages. When the details deemed unnecessary for a business executive are omitted, the summary becomes a very helpful guide occupying only one-half of a page or less and revealing an over-all picture that is easily understood. The application-of-funds idea is far too valuable to abandon. Its survival depends on some simplification such as that presented above, which might be said also to increase its power of elucidation.

## STATEMENTS ACCOUNTING FOR BALANCE SHEET CHANGES

JOHN N. MYER

**E**XAMINATION of the changes in the position of the accounts listed in successive balance sheets of a business is a useful analytical procedure. There are two kinds of statements for this purpose that may be derived from the financial statements.

### STATEMENT ACCOUNTING FOR VARIATION IN NET WORTH

A form of comparative balance sheet showing the changes in the account balances between balance-sheet dates is shown in Exhibit I. In this statement the changes are classified according to their effect on net worth:<sup>1</sup> increases in assets and decreases in liabilities and reserves cause an increase in net worth, while decreases in assets and increases in liabilities and reserves result in a decrease in net worth. The change in net worth is the difference between these increases and decreases, and this change is accounted for by the total of the changes in the items

composing net worth—in this instance, capital stock and surplus. This statement has been named by the writer the statement accounting for variation in net worth.

### STATEMENT ACCOUNTING FOR VARIATION IN WORKING CAPITAL

The vital activities of a business, such as the acquisition of capital and the liquidation of indebtedness, the purchase of equipment and merchandise, and the appearance of revenues and expenses, are reflected in the current asset and current liability accounts. A study of the changes in these accounts, which represent the working capital, provides a useful summary, particularly when the data of the profit and loss statement are combined with those of the balance sheet.

A statement accounting for variation in working capital is shown in Exhibit II. This statement is divided into two sections, the first consisting of a comparative working-capital schedule showing the balances of the current asset and current liability accounts as at the end of two suc-

<sup>1</sup> The writer is conscious of the unsatisfactoriness of the expression "net worth" but continues to use it because no term has as yet been generally accepted in its place.

|   | Debits<br>(Assets) | December 31      |                 | Net Worth       |                 |
|---|--------------------|------------------|-----------------|-----------------|-----------------|
|   |                    | 1943             | 1942            | In-<br>crease   | De-<br>crease   |
| Cash.....   |                    | \$ 6,432         | \$ 4,285        | \$ 2,147        |                 |
| Marketable securities.....                              |                    | 5,500            | 12,650          |                 | \$ 7,150        |
| Accounts receivable.....                                |                    | 21,483           | 15,969          | 5,514           |                 |
| Merchandise inventory.....                              |                    | 56,985           | 30,280          | 26,705          |                 |
| Income from investments accrued.....                    |                    | 150              | 725             |                 | 575             |
| Furniture and fixtures.....                             |                    | 18,953           | 12,486          | 6,467           |                 |
| Deferred charges.....                                   |                    | 850              | 1,750           |                 | 900             |
|   |                    | <u>\$110,353</u> | <u>\$78,145</u> |                 |                 |
| <br><i>Credits</i><br>(Liabilities and Reserves)        |                    |                  |                 |                 |                 |
| Accounts payable.....                                   |                    | \$ 10,124        | \$10,953        | 829             |                 |
| Accrued expenses.....                                   |                    | 1,050            | 460             |                 | 590             |
| Reserve for bad debts.....                              |                    | 250              | 150             |                 | 100             |
| Reserve for depreciation of furniture and fixtures..... |                    | 6,185            | 3,625           |                 | 2,560           |
| Royalty income deferred.....                            |                    | 850              | 200             |                 | 650             |
| Excess of increases over decreases.....                 |                    |                  |                 |                 | 29,137          |
|   |                    |                  |                 | <u>\$41,662</u> | <u>\$41,662</u> |
| <br>Accounted for as follows:                           |                    |                  |                 |                 |                 |
| CAPITAL STOCK.....                                      |                    | 75,000           | 50,000          | 25,000          |                 |
| SURPLUS.....  |                    | 16,894           | 12,757          | 4,137           |                 |
|   |                    | <u>\$110,353</u> | <u>\$78,145</u> | <u>29,137</u>   |                 |

EXHIBIT I. STATEMENT ACCOUNTING FOR VARIATION IN NET WORTH.

cessive periods, and the increase or decrease in working capital due to the change in each balance. The second section consists of a summary of the transactions that caused the change in working capital. It shows (a) increases in working capital resulting not only from regular operations but also from the sale of fixed assets and from additional investment in the business, and (b) decreases in calculated working capital caused not only by the cost of the goods sold and expenses but also by the purchase of equipment and the payment of dividends. It is thus seen that the statement presents data from the balance sheet and the profit and loss statement in a manner different from the presentation in the original statements.

Except in a very simple case, it is necessary to construct a working sheet in order to prepare the statement under discussion. Such a working sheet is illustrated in Exhibit III. Columns 1 and 2 contain the

balance-sheet figures as of December 31, 1942, and December 31, 1943, and the profit and loss statement figures for the year ended December 31, 1943. Columns 3 and 4 show the changes between the two balance-sheet dates. Columns 5 and 6 contain certain eliminations and adjustments of the changes in Columns 3 and 4. These eliminations and adjustments will now be explained.

Since the sole object of the statement is to provide an explanation of the changes in working capital, any balance-sheet change not caused by accounting transactions which affect working capital is to be eliminated. Similarly, any profit and loss statement item not the result of working-capital transactions is to be eliminated; and those not entirely the result of working-capital transactions are to be adjusted to include only such transactions.

The eliminations and adjustments in

# Statements Accounting for Balance Sheet Changes

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## SECTION 1. COMPARATIVE WORKING CAPITAL SCHEDULE

|   | December 31<br>1943 | 1942             | Working Capital<br>In-<br>crease | De-<br>crease   |
|---|---------------------|------------------|----------------------------------|-----------------|
| Current assets:                         |                     |                  |                                  |                 |
| Cash.....                               | \$ 6,432            | \$ 4,285         | \$ 2,147                         |                 |
| Marketable securities.....              | 5,500               | 12,650           |                                  | \$ 7,150        |
| Accounts receivable (net).....          | 21,233              | 15,819           | 5,414                            |                 |
| Merchandise inventory.....              | 56,985              | 30,280           | 26,705                           |                 |
| Income from investments accrued.....    | 150                 | 725              |                                  | 575             |
|   | <u>\$90,300</u>     | <u>\$ 63,759</u> |                                  |                 |
| Current liabilities:                    |                     |                  |                                  |                 |
| Accounts payable.....                   | \$10,124            | \$ 10,953        | 829                              |                 |
| Accrued expenses.....                   | 1,050               | 460              |                                  | 590             |
|   | <u>\$11,174</u>     | <u>\$ 11,413</u> |                                  |                 |
| Working capital.....                    | <u>\$79,126</u>     | <u>\$ 52,346</u> |                                  |                 |
|   |                     |                  | <u>\$ 35,095</u>                 | <u>\$ 8,135</u> |
| Excess of increases over decreases..... |                     |                  |                                  | <u>26,780</u>   |
|   |                     |                  | <u>\$ 35,095</u>                 | <u>\$35,095</u> |

## SECTION 2. CAUSES OF THE ABOVE CHANGES

|  |                  |
|--|------------------|
| Transactions increasing working capital:     |                  |
| Sales.....                                   | \$143,559        |
| Income from royalties.....                   | 4,525            |
| Income from investments.....                 | 629              |
| Profit on sale of marketable securities..... | 1,850            |
| Received from sale of capital stock.....     | 25,000           |
| Received from sale of furniture.....         | 180              |
|  | <u>\$175,743</u> |
| Transactions decreasing working capital:     |                  |
| Cost of goods sold.....                      | \$ 72,457        |
| Selling and administrative expenses.....     | 63,089           |
| Bad debts.....                               | 225              |
| Dividends paid.....                          | 6,000            |
| Purchase of furniture and fixtures.....      | 7,192            |
|  | <u>148,963</u>   |
| Increase in working capital.....             | <u>\$26,780</u>  |

## EXHIBIT II. STATEMENT ACCOUNTING FOR VARIATION IN WORKING CAPITAL.

the illustrative case are as follows:

- The increase in surplus caused by the closing of net profit into this account was not a transaction which affected working capital; it is therefore eliminated.
- Elimination (a) left a debit change in surplus of \$6,000, representing a dividend paid. Since the payment of the dividend did affect working capital, the change is not eliminated. In order to indicate what it represents, this amount is transferred to a "Sundry Working Capital Transactions" section at the bottom of the working sheet.
- (c), (d) The deferring of expenses and income did not affect working capital; therefore, these items are eliminated and the appropriate items in the profit and loss statement section are adjusted accordingly.
- The depreciation of furniture and fixtures did not affect working capital and is therefore eliminated.
- Changes in fixed-asset accounts not the result of working-capital transactions are eliminated. In the present case furniture which cost \$725 and had been depreciated \$125 was sold for \$180. The entry for the sale was:

|   |               |
|---|---------------|
| Cash.....   | \$180.        |
| Reserve for depreciation of furniture and fixtures..... | 125.          |
| Loss on sale of furniture.....                          | 420.          |
| <u>Furniture and fixtures.....</u>                      | <u>\$725.</u> |



The only effect of this entry on working capital was an increase in cash of \$180; therefore, all parts of the entry are eliminated except the \$180, which is transferred to the "Sundry Transactions" section and will be part of the explanation of the change in working capital.

The eliminations and adjustments having been completed, the adjusted changes in current assets and current liabilities are carried into Columns 7 and 8. These columns form the basis for the upper part of the statement (Exhibit II). The other balance-sheet items and the profit and loss statement items, adjusted, are carried into Columns 9 and 10. These items are the causes of the changes in the working capital and constitute the data for the lower part of the statement (Exhibit II).

#### HISTORY OF THE STATEMENTS

*Where Got Where Gone Statement.* The type of statement here called the statement accounting for variation in net worth was suggested in 1908 by William Morse Cole.<sup>2</sup> Cole reasoned that "... an increase in a resource [asset] account indicates that something has been spent to acquire that increased resource. Similarly, a decrease in a liability account indicates the same sort of thing, for the liability must have been paid off, and therefore something has been spent." Accordingly, increases in assets and decreases in liabilities he called "Where gone (*or* Expenditures *or* Debits)." Further, he reasoned that "... a decrease in a resource account indicates that something has been taken from this account during the year and spent elsewhere; or, what amounts to the same thing, this decrease is part of an exchange of one asset for another. Similarly, again, an increase in a liability account indicates that the firm has borrowed some sort of property and hence it by so much has had means to spend." From this Cole

concluded that "By making a comparison, then of ... balance sheets, tabulating the increases and decreases of resources and liabilities, we can see from what sources all receipts came and to what destination all expenditures went." As a result, decreases in assets and increases in liabilities he called "Where got (*or* Receipts *or* Credits)."

In a later work<sup>3</sup> Cole changed the expression "where gone" to "application of values" and the expression "where got" to "source of values."

Upon referring to Exhibit I, it will be noted that Cole's title for the column headed "Net Worth Increase" was "where gone" or "application of values," and for the column headed "Net Worth Decrease" Cole's title was "where got" or "source of values." However, Cole's terminology does not appropriately describe all balance-sheet changes. For example, the increase in a reserve for depreciation is classed as a "got" or "source of value," for, said Cole, "... the property ... has been partly worn out producing something in its place."<sup>4</sup> This explanation is vague; one might well wonder whether the amount of value produced was equivalent to that of the property that was worn out.

Recent writers,<sup>5</sup> following Cole's trend of thought, have sought to clarify the matter in the following words: "The company appropriated \$... as addition to the reserve for depreciation. For this a charge was made against gross income, and since gross income was large enough to cover all expenses, including depreciation, the company has had<sup>6</sup> funds for this amount available during the year." This explanation is hardly more convincing than that of Cole. One might also wonder what explanation would be given in case

<sup>2</sup> *The Fundamentals of Accounting* (Boston, 1921), pp. 348-350.

<sup>3</sup> *Accounts*, p. 100.

<sup>4</sup> Hatfield, Sanders and Burton, *Accounting Principles and Practices* (Boston, 1940) p. 364.

<sup>5</sup> Equivalent to Cole's "got."

<sup>2</sup> *Accounts; Their Construction and Interpretation* (Boston, 1908), pp. 97-101.

the gross income was not large enough to cover all expenses.

From an examination of Exhibit I it will also be doubted whether the decreases in deferred charges and accrued income and the increases in accrued expenses and deferred income are "gots" or "sources of value." Then too, when marketable securities decreased, was an equivalent amount of value "got"?

Cole's statement obviously does not show the sources and applications of "values" or resources but merely the net changes in the accounts between balance-sheet dates. The assumption that every balance-sheet change represents either a source or an application of "values" or resources is not a valid one. Unfortunately, this type of statement, purporting to show the sources and applications of resources, has gained acceptance in many current textbooks on accountancy. The terminology used by the present writer has been adopted largely in order to offset the defects in the older terminology.

*Statement of Application of Funds.* One of the problems in the examination prepared by the American Institute of Accountants for May, 1921, required the candidates to "prepare a statement of resources and their application." A solution of this problem by H. A. Finney was later published in the *Journal of Accountancy*.<sup>7</sup>

In place of Cole's term "values," the American Institute's examiners used the word "resources," but in his solution Finney replaced this by "funds." Instead of Cole's term "sources" Finney employed the word "provisions." Finney called his solution a statement of application of funds, dividing it into two parts: "funds provided" and "funds applied."

Finney employed in the preparation of

his statement a working sheet similar to that of the writer shown in Exhibit III. There are, however, several differences. Finney does not use the profit and loss statement in his work, so that in making adjustment (a) of the illustration he carries the net profit to a profit and loss section and makes his profit and loss adjustments against that single profit or loss figure, with the result that instead of tabulating in the resulting statement of application of funds shown in Exhibit IV the various profit and loss items involved, there appears one item entitled "funds provided by profits." Finney's working-capital schedule is similar to that shown in Exhibit II except that deferred charges are included. The writer has not seen an illustration by any author, but has used one himself, that includes deferred income, and assumes that under the method used by Finney the deferred income would be placed in the working-capital schedule just as deferred charges are.<sup>8</sup>

#### FUNDS PROVIDED

By profits:

|   |          |                 |
|---|----------|-----------------|
| Net profit for the year.....                          | \$10,137 |                 |
| Add charges to profit and loss<br>not requiring funds |          |                 |
| Depreciation of furniture<br>and fixtures.....        | 2,685    |                 |
| Loss on sale of furniture...                          | 420      |                 |
|   |          | \$13,242        |
| By sale of furniture.....                             | 180      |                 |
| By sale of capital stock.....                         | 25,000   |                 |
|   |          | <u>\$38,422</u> |

#### FUNDS APPLIED

|  |          |          |
|--|----------|----------|
| To purchase of furniture.....  | \$ 7,192 |          |
| To payment of dividends.....   | 6,000    |          |
| To increase working capital<br>(with which are included deferred<br>charges and deferred<br>income)..... | 25,230   | \$38,422 |

#### EXHIBIT IV. STATEMENT OF APPLICATION OF FUNDS.

<sup>8</sup> In a recent book, Fjeld and Sherritt, *Intermediate Accounting* (New York, 1942), p. 394, the authors, apparently conscious of the incorrectness of mixing deferred charges with the working capital, have inserted a separate column for deferred charges in their working sheet and show them separately in the resulting statement. They, however, do not state what should be done with deferred income.

<sup>7</sup> Vol. XXXII, No. 1, July, 1921, pp. 65-67. Finney's method was later incorporated in his *Principles of Accounting, Intermediate* (New York, latest ed. 1934), Chapter 29.

It is seen that under the writer's method the statement is one to account for the change in working capital, whereas under Finney's method it is one that purports to show the provisions and applications of funds, the increase or decrease in working capital being but one of these provisions or applications.

Through the use of a working sheet Finney apparently sought to overcome the defects in Cole's statement. There was an underlying assumption in Cole's work that every balance-sheet change represents a provision or application of resources, or what Finney later termed "funds." This, of course, is not so. For, as Finney says,<sup>9</sup> "Some increases and decreases may be the result of mere book entries which did not record transactions either providing or applying funds," as when land is written up or goodwill written down. Also, "some increases or decreases may indicate that funds have been provided or applied, but the increase or decrease in the balance of the account may not represent the true amount of the funds provided or applied." In such cases adjustments may be made in the working sheet.

It is shown above that Cole had classified an increase in a reserve for depreciation as a "source of values." That the depreciation of property should be a source or provision of resources or "funds" seemed paradoxical. Therefore Finney took the position that the depreciation charge represents a deduction from income not requiring "funds." He accordingly adopted the procedure of adding the amount of depreciation back to the net profit in order to arrive at the "funds provided by profits."

Finney, however, struck a snag in the case of the reserve for bad debts. This reserve is, of course, set up by an entry similar to that for depreciation and does not require the use of "funds." But to

eliminate the change in the bad-debts reserve, as was done with the depreciation reserve, would result in an incorrect working-capital schedule. And so, in order not to impair the working-capital schedule, Finney does not adjust for this item and thus he permits an inconsistency in procedure.

Since it appears to be generally understood that "funds" means cash or, at most, cash and securities readily convertible into cash, Finney's statement of application of funds purports to show what amount of cash flowed into the business and what use was made of it—at least that is the general opinion of those who have accepted his statement. However, information as to the flow of funds cannot be supplied by the type of statement under discussion, for the reason that the procedure followed in its construction utilizes only the changes in account balances as at two successive closing dates.

In the illustration herewith, for example, marketable securities decreased \$7,150. According to Cole's statement, on which Finney's is based, this decrease of \$7,150 would, in Finney's terminology, represent a provision of funds. But it is not necessarily the case that the only change in the account was a sale of \$7,150 of securities. If the business had during the period purchased securities for \$10,000 and sold some for \$17,150, there would have been an application of funds of \$10,000 and a provision of \$17,150. Cole's method, however, takes the difference between the provisions and applications and calls it a provision or application, according to which is greater. Finney avoids this error by carrying the net changes in the current asset and current liability accounts into a pair of columns for working capital and showing the net of the net changes in these accounts—that is, the increase or decrease in working capital—either as a provision or application of funds, thus compounding

<sup>9</sup> *Op. cit.*, pp. 502-503.

the error in a manner unnoticed by the average reader. Under this procedure an increase in working capital is considered an application of funds and a decrease a provision of funds. It is certainly difficult to see how funds are provided by a decrease in working capital!<sup>10</sup>

#### CONCLUSIONS

1. There is a fallacy underlying most of the writing on the type of statement under discussion to the effect that it is possible by the procedures used to obtain a summary of the "flow of funds" into a business and their disposition. Such information, however, cannot be obtained by the procedures followed, since only the net changes in the account balances are used. The resulting statement can deal only with changes in the position of the accounts between two closing dates.

Much of the Confusion has been caused by an unfortunate choice of terms which have misrepresented the statements. The words "funds,"<sup>11</sup> "provisions," and "applications" are misleading in this connec-

tion and should never have been used. A survey of recent literature reveals that most writers have been rather uncertain as to the meaning of "funds" and, as a result, have made unwarranted assumptions concerning the statement.<sup>12</sup>

2. The writer has outlined two statements that present a survey of balance sheet changes: (1) the statement accounting for variation in net worth, and (2) the statement accounting for variation in working capital. It is the object of these statements to provide information regarding changes in the position of the accounts. The first statement provides information on the changes in the balances of all accounts found in the balance sheet; the second statement shows the changes in the current asset and current liability accounts and explains these changes in terms of operations and other factors which affect the working capital. These statements are consistent throughout and do not pretend to present information which they cannot provide.

3. If it is desired to have a statement which shows the provisions and applications of funds, such statement will necessarily have to be compiled either from an analysis of cash receipts and disbursements or from an analysis of the accounts.

<sup>10</sup> The writer has not found a definition by Finney of his use of the word "funds." Fjeld and Sherritt, *op. cit.*, p. 381, state that "funds" as used in the funds statement "... is not restricted to cash or securities set aside for a special purpose; it includes all current assets. ... the funds statement includes working capital derived, whether in cash or some other form." Their procedure for the preparation of a statement of application of funds is substantially in agreement with that of Finney. According to that procedure, a decrease in working capital is a provision of funds; but since Fjeld and Sherritt define "funds" as working capital it follows that in the case of a decrease in working capital they would be in the position of saying that a decrease in working capital is an increase in working capital.

<sup>11</sup> A criticism of Finney's use of the word "funds" and of his statement of application of funds by Paul-Joseph Esquerré is found in the *Journal of Accountancy*, Vol. XXXIX, No. 5, May, 1925, pp. 424-430; Finney's reply is found in the following number of the *Journal*, pp. 497-511.

<sup>12</sup> For example, Maurice Moonitz, "Inventories and the Statement of Funds," *THE ACCOUNTING REVIEW*, July, 1943, Vol. XVIII, pp. 262-266, first debates the meaning of "funds" and then, having adopted "cash or its equivalent" as his ideal, proceeds to suggest an improvement of what he considers current practice, not realizing that the statement cannot, as a result of the procedures in use, show the provisions and applications of "cash or its equivalent."

Another example is afforded by the discussion of the writer's method in the *Journal of Accountancy* for October, 1941, Vol. LXXII, p. 357, and the writer's reply the following month in the same journal, pp. 457-458.

# DEPRECIATION AND INCOME MEASUREMENT

CARL THOMAS DEVINE

**T**HERE IS, it is generally agreed, something wrong with charging a long-lived asset to expense in the period of its acquisition. To follow this practice in ordinary commercial accounting is, however, no more unreasonable than the various retirement proposals that would take no depreciation until the unit is retired. For the accountant the criteria for writing off assets are independent of the initial bricklayers and of the wrecking crew that removes the last debris. What then should be the signals for taking depreciable assets to expense? Perhaps the most common argument is that the assets should be depreciated as their services are rendered. This approach has been emphasized as an ideal toward which accountants are working and by which their practical measures may be tested; yet this ideal is based mainly on a vague feeling of justice which seems to be in need of independent support. It is the primary purpose of this paper to examine once again the income concept and to suggest an alternative for the ethical approach.

Many small businessmen do not think they have any profit until the original investment has been entirely recovered; although this type of thinking is contrary to the attitude accountants attempt to instill in their clients, it is sometimes not unreasonable. Suppose, for example, that a local filling station operator decides to form a partnership and open a chain of tourist cabins which are to cost \$5,000. Assume further that the cabins are so constructed that all essential parts may be expected to last 10 years, after which time the project will be abandoned with negligible scrap sales or removal costs. There

is certainly no reason why this enterpriser should not think along the following lines: Revenues are expected to exceed periodic outlays (including interest that might have been earned on the funds if invested elsewhere) by \$800 each year; in 6½ years the investment will be recovered and later returns will be free of any depreciation charge. This method of calculating in this case is certainly just as adequate as that which calls for an extra \$500 deduction from estimated revenues each year to cover depreciation. It may be pointed out, and correctly, that the method by which the businessman makes these calculations has nothing to do with the manner in which income should be reported. This is true, of course. But why should this individual, or any other individual, be required to submit income reports in the formal sense? What function is served best by the computation of net income?

Certainly reports of the stewardship of management need not take the form of income statements. A simple statement which shows the excess of receipts over operating expenses may be sufficient. Further comparisons of the actual amount of investment recovered with the estimated recovery for that period may be made. This may include a statement showing (at both actual and estimate) the number of years that must pass before the investment will be recovered and "profit" may be expected. These statements may also be supplemented by various statistical aids, such as cumulative charts of the amounts recovered, the trend of recoveries by periods, etc. Schedules of average variable costs, revenue trends, percentage of

capacity operations, and the like, may be added. Withdrawals may be arranged during the operating years by agreement among the owners.

The first need for orthodox income computations comes with the combination of the desire of owners for withdrawals and the rise of an important creditor class. So long as there are no important creditors, withdrawals may be made by owners regardless of whether or not original investment has been kept intact, although some kind of guide to consumption may be highly desirable. Both the undesirability of withholding distributions until after liquidation of liabilities and the desirability of protecting the rising creditor class are elements which urge the reporting of periodic income. Both aims can be approximated by dividing recognized revenues into that part necessary for maintenance of investment and that part which is a disposable surplus.<sup>1</sup>

From the foregoing discussion it should be obvious that the most important need met by income computations and not met by other calculations is that of determining the amounts which may be distributed to the owners without impairing the "capital" of the concern. With few exceptions, the accountant probably accepts as an ideal the function of income figures as measures of the *amounts which a man can consume or a corporation can distribute without impairing future earning possibilities*. Except when liquidation is imminent, the "earning power" concept of capital seems to be an appropriate ideal. Practically, emphasis on the consumption and distribution aspect makes it advisable to give added attention to the availability of

the funds arising from income transactions. Finally, the accountant, shouldered with the responsibility of measurement, is willing to compromise with his ideals and crystallize the income-determining process so that the figures are derived with reasonable uniformity and are safe from manipulation by those who stand to gain by such maneuvers. These compromises are usually called "accounting principles." Let us examine some of these compromises in terms of the broad ideal of income accounting as given here.

In order to operate in a way that will keep future earning possibilities intact, it is necessary to estimate not only the future life of plant and equipment but also future market conditions, future managerial efficiency, future replacement costs, future improvements, etc. The accountant is perforce something of a soothsayer, and he does not shirk looking into the future, but to estimate these highly variable and highly intangible conditions requires a rare ability not widely found or expected. Certainly some simplifying assumptions are necessary.

The first step in this direction is to make a careful distinction between services acquired by exchange transactions and those "furnished" by the enterprise. With this done, the accountant proceeds to assume that it is the earning possibilities of the acquired factors that should be kept intact. Unless prospects for utilization of the plant facilities are exceptionally poor, management and marketing conditions and the rest are considered adequate to exploit the assets; and generally these conditions are assumed to be passive. It is tempting to continue the argument and hold that inasmuch as net income is assumed to be the result of these "enterprise" factors, income should be recognized as the contributions of the enterprise itself are made. This "principle" arises, of course, from the assumption that the fac-

<sup>1</sup> "Progress" reporting, such as is suggested above, becomes more difficult when the assets are of varying length of life and are installed at different dates. For a firm that is expanding or contracting, this type of reporting becomes even more complicated. Maintenance of capital is, as suggested by Preinreich, the boundary separating expansion on the one hand and contraction on the other.

tors acquired by exchange transactions yield income equal to their cost, thus creating a condition by which any positive or negative net income resulting from operations is automatically attributed to a non-cost factor, the enterprise itself. While this approach may yield reasonable results, it is more direct to argue that when a transaction has been made which increases the earning potentialities of the acquired factors of the firm, something may ordinarily be consumed without impairing the prior earning possibilities.<sup>2</sup> Obviously, in either case considerations of detachability and of uniformity must be given full attention as modifying conditions. It is clear also that the total of the items in the balance sheet bears little relation to the value of the concern as a single business unit.<sup>3</sup> Moreover, the attempted simplifying of conditions merely exchanges difficulties; the estimation of numerous inseparable services now replaces the determination of enterprise value.

Within the past few years there have been strong influences tending to crystallize accounting thought and practice toward the use of historical or original cost.<sup>4</sup> Lest these influences be taken too unquestioningly, let us look at the case for historical costs as well as at the case for some alternative approaches.

The accountant, let us emphasize again, has been forced to abandon the hope of determining periodically the future earning power of the entire enterprise, and some

have decided to compromise by insisting on the maintenance of constant facilities for profitable operations. So long as the assets are to be replaced immediately, the sacrifice in making a sale is clearly the amount necessary to replace the earning possibilities of the assets. An income definition by which we wish to hold earning possibilities intact—at least in terms of the physical equipment—must match with the revenues not the historical cost but the cost of replacing the unit, in order to determine reportable income.<sup>5</sup> This shift from the enterprise view to that of holding physical facilities intact heralds the independence of the total asset figure from the amount representing the discounted value of the entire enterprise.

The above modification is that used by defenders of last-in, first-out. In handling long-lived assets on this replacement-cost basis some practical difficulties are encountered. To show the sacrifice involved in the sense that an identical amount of funds would have to be expended to replace the physical facilities for profit making, it becomes necessary to look into the future and to estimate not only the life of the instrument but also its *expected replacement cost when replacement becomes necessary*. Assuming that the units are to be replaced, there is certainly no reason to presume that withholding (at least for income computations) an amount from revenues equal to the "depreciation" calculated on replacement cost at various

<sup>2</sup> Throughout *Inventory Valuation and Periodic Income* (Ronald Press, 1942) I was not able to get free of the "enterprise contribution" approach to the problem of income recognition. Some of the arguments therein presented could have been improved materially and some conclusions altered through the use of the more direct method outlined in this paper.

<sup>3</sup> Even Canning has his "master valuation account." His widely discussed, though widely misunderstood, "indirect valuations" are essentially replacement costs. *The Economics of Accountancy* (Ronald Press, 1929), p. 188.

<sup>4</sup> For example, W. A. Paton and A. C. Littleton, *An Introduction to Corporate Accounting Standards* (American Accounting Association, 1940).

<sup>5</sup> It is interesting to subject the old buggy problem to the income concept and modification outlined above. The merchant, it should be recalled, has a buggy that cost him \$60, sells it for \$65, and replaces it immediately for \$65. He now has an identical asset except for the price tag. Has he made any reportable profit? It should be clear that the last-in, first-out procedure, which matches \$65 with revenues, provides for keeping earning possibilities intact more adequately than the first-in, first-out approach. Even one uninitiated in business knows that the only way in which he has made \$5 is either for the price to remain at the higher level indefinitely or for the line to be discontinued. It should be noticed that the important financial consideration of fund detachability is not used in the above argument.

arbitrary points (corresponding to the ends of the accounting periods) would accumulate, over the life of the assets, to an amount equal to their replacement costs or to the future cost of other assets which would have the same potentialities. Ideally, in order to approximate as closely as possible the central income assumption, the depreciation should be taken with regard to expected replacement costs when replacement becomes necessary, and "use" depreciation should be modified by any changes in the estimated replacement costs at the earlier and later dates of replacement and modified also for the estimated interest on the funds for the same interval.

To illustrate the differences between the various approaches, suppose that a plant with a life of 20 years and no residual value is purchased for \$100,000. The estimated replacement cost at the end of one year is \$110,000, at the end of the second, \$95,000, and at the end of the twenty years, when the facilities are to be replaced, the replacement cost is \$80,000. Advocates of historical cost would write off the full \$100,000 over the twenty years. Proponents of traditional replacement cost would argue that the bases for annual depreciation should be found by using the \$100,000, the \$95,000, and the other figures, modified slightly perhaps for average replacement cost over the periods, rather than the figures for the end of the periods. The method recommended in this paper takes the depreciation on the \$80,000 base and by so doing—subject to technological changes—keeps the facilities for operations intact. This is, in fact, the approach used by defenders of using last-in, first-out in the inventory method, except that in the case of inventories, replacement is usually made within a short time. Original cost will not give the correct total charge (at least under these assumptions) unless the cost at the date of re-

placement happens to be equal to the original cost of the preceding generation of assets. The traditional replacement-cost method might yield the desired figure for total depreciation, but if it does so, it is due only to chance. The real objection to our income concept is obvious; the difficulties of estimating replacement cost years in advance are depressing indeed.

The replacement scheme may be subject to another objection, though this one is not so serious. This objection to the replacement approach as outlined here will no doubt center about the amorphous concept of "capital loss." It may be argued this way. Suppose that at the date of replacement it will take less than original cost to replace the facilities, so that the original cost figure will not be completely written off the books. The orthodox accountant will no doubt insist that a capital loss be taken as soon as the change becomes obvious, or at least that it be spread over the life-period of the first generation of assets. If the degree of competition is such that the return will normally be brought down to a fair return on the newer figure, then, according to the ideal income assumption, replacement cost should not be attached to one new machine but to enough machines (or parts thereof) to maintain the earning power of the original asset when it was installed. On the other hand, if the asset falls in replacement cost but continues to yield an undiminished return—a position that indicates some degree of monopoly—according to our approach the owners would need to withhold less and could consume more. It is not now necessary to keep so large an amount intact; so a larger remainder is therefore available for consumption. It should be observed that assumptions regarding the state of future markets and the degree of monopoly are necessary. Perhaps the assumption of adherents of normal-stock inventory—that the physical means shall

be kept intact—is the best that can be done in practice. But what about the asset write-down?

On the basis of the fundamental income assumption, the absence of write-off of the unamortized balances would indicate a constant relation (through time) between the asset carrying figures and the expected earning power. Capital adjustments would be made only for drastic changes in overall estimates of earning possibilities.<sup>6</sup> This position is not one which may be used in defense of the "continuing transaction" doctrine advocated by Professor Saliers, income tax authorities, and others. According to the assumptions, the undepreciated portion, if any, may be neglected so long as the enterprise operates with approximately its original expectations and liquidation is not contemplated.

It should be emphasized that this approach to the income concept assumes continuity of operations for indefinite periods. The question as to what should be done if an asset is not to be replaced is sure to be raised. To be consistent with the central income concept, enough should be subtracted from revenues to restrict funds sufficiently to keep the earning power of the enterprise intact if the restricted funds are invested in other objects that may come under the management of the firm. Partial liquidation is rarely assumed. A further objection to this general approach may be raised: depreciation is here defined in terms of funds for replacement and it is usually argued that depreciation has no direct connection with replacement funds but is the spreading of a sunk cost to periodic operations. But the whole point of the income concept here discussed is that depreciation in theory is the amount that will keep the earning power intact—at least in terms of physical facilities—and

that the concept of spreading a sunk cost is an imperfect substitute without independent defense.

It should be emphasized that the "principle" of original cost, which spreads sunk costs over accounting periods, does not assume indefinitely continuing operations but instead proceeds by assuming a series of piecemeal liquidations corresponding to the life cycles of various assets. At the end of these cycles the costs are entirely cleared out. If replacement costs have increased, it is clear that the capital kept intact is not adequate to maintain the earning possibilities for a future generation of plant, and according to the income view advocated here original cost yields only rough approximations of the desired income figures. Historical costs may be entirely adequate for ordinary situations or when liquidation is a possibility though not imminent; but the cost principle is clearly a further compromise made for practical considerations of measurement. It should be noted, however, that the "objective" character of historical cost should be argued with care. The base, it is true, has some degree of objectivity but the assignment to various periods is certainly highly subjective.

There has been considerable agitation from certain quarters, particularly from Sweeney, for modifying historical cost figures because of changes in price levels.<sup>7</sup> These accountants urge that expense figures should be based on historical costs expressed in uniform and current monetary equivalents. In this process the asset figures are usually converted to represent (subject to modification for depreciation)

<sup>6</sup> H. W. Sweeney, *Stabilized Accounting* (Harpers, 1936). Even Professor Paton, who is now the keystone of the defenders of historical cost, has some sympathy for the "price level" approach. *Advanced Accounting* (Macmillan, 1941) Ch. XXXIII. Professor Husband also appears sympathetic, though his criticism of last-in, first-out does not seem to take into consideration the distinction above. "The First-In, Last-Out Method," *THE ACCOUNTING REVIEW*, June, 1940, pp. 194 ff.

<sup>7</sup> G. A. D. Freinreich treats the capital loss concept at some length. *The Nature of Dividends* (New York, 1935), pp. 21-22.

the amount of current dollars which are equivalent to the general purchasing power given up when the actual commitments were made. Sweeney's statement that, "... accounting data should ideally be measured with reference to the progress made in obtaining either more consumption goods or greater power over them,"<sup>3</sup> must, in order to avoid unrealistic liquidation implications, refer to earning power preservation in real terms. Will the preservation of a pool of purchasing power maintain a constant stream of real income, assuming that future management and other factors are constant? It should be clear that if product prices change exactly with "general" prices, the maintenance of money income should correspond to the maintenance of real income. Suppose, however, that product prices move above general prices, and both are above their initial levels. It should be obvious that fewer physical facilities than before are necessary for maintenance of real earnings. Inasmuch as the translation of the future income stream into real units calls for estimation of future price-level changes as well as the future pricing policy of the firm, the compromise of trying to maintain the money income stream is understandable. But what exactly does the technique suggested by Sweeney accomplish? It substitutes a more general index for replacement costs, yet the introduction in accounting of interim general price-level changes for the assets and expenses of a concern clearly is a far cry from maintaining the future income stream in real terms except perhaps in the short run, i.e., over the life of existing assets. Price-level accounting, to accomplish its purpose in the long run, should be applied to expected replacement cost and not to the original cost.

The controversial problems of apportioning depreciation to periods center

around that part of depreciation which is not easily associated with the activity of various properties. Except in utility company problems the relative merits of each of the regular depreciation methods are usually argued with relation to the benefit criterion. These arguments may be reviewed and possible objections discussed briefly.

Defenders of diminishing-charge methods asserts that services from an old property are likely to be less because of extensive repairs in later years, and that repair expense in later periods may ordinarily be expected to be greater; hence total charges increase under straight-line while services tend to decrease. The argument for increasing-charge methods revolves around the "services" from the recovered and restricted funds which should be earning some return. Assuming nearly equal services from the properties period by period, an increase in the depreciation charge just equal to the expected return on restricted "depreciation" funds will offset the additional services from the recovered funds and leave a constant relation of services and depreciation expense. Increasing-charge proponents emphasize the capital funds impounded by the original investment in the asset rather than the physical property itself. The defense for the straight-line method (in addition to its ease of application) centers around its position as a compromise. To the extent that earnings on the restricted funds make up for the loss in earning power of the aging asset, the straight-line approach appears to conform rather well to the benefit doctrine of allocation.

The "consumption" approach to measuring income seems to favor the compound-interest method, since in the use of other methods there is usually a tendency for total income (from plant and investments) to increase until the retirement dates. While this effect may average out,

<sup>3</sup> *Op. cit.* p. 4.

it is in theory hardly consistent with the concept of keeping earning power intact. After the plant is seasoned, funds which will never be necessary to maintain operations may be offset by less physical capacity in the future, and for an indefinitely continuing firm these funds may be considered in the income calculation through our replacement approach via smaller depreciation charges. This, of course, is an extension of our original concept of "maintaining physical facilities intact" to include the recovered funds.

The principle of ethical benefit also has certain limitations when applied to the problems of expected and unexpected idleness. For an illustration, consider a tobacco warehouse with an estimated life of twenty years. Suppose that original expectations were for the use of the warehouse for the full twenty years, but after the tenth interval the building is not utilized for the following year. Assume further that it is still thought that the eleventh year was exceptional and that the warehouse will be used in the remaining periods. Many accountants have become so involved with practical rules that they insist the asset "depreciates" whether or not it is used, and that consequently depreciation should be recorded as if Time requisitioned the services.

If one uses the benefit criterion, it is clear that no depreciation should be taken in the eleventh year. That year received no benefit, and therefore should not be burdened. In fact, it may be argued that the costs of carrying the warehouse (taxes, painting, etc.) should also be excluded from the current report. This criterion indicates that no depreciation expense should be taken in the current period, but this test does not help in selecting between other alternatives. One unsatisfactory treatment is to make a surplus adjustment covering the correction for the first ten years and a new rate based on  $1/19$  of the cost for the

remaining nine years. This approach is in keeping with the assumption that the miscalculations in estimated life should be spread over the entire service life of the asset. The alternative, and more common, approach is to regard the past periods as satisfactory and take the eleventh year's charge (on a strict time basis) to surplus or to a section of the income sheet which includes this and other "inconvenient" items.

Assuming that the income figures are to be used primarily as measures of the amounts which may be consumed without making the firm any better or worse off, one is able to select the more desirable approach. There is no question that the service possibilities of the warehouse are not the same at the beginning and at the end of the period. Some deduction should then be made from the revenues of the period (if any) to compensate for the decrease in potentialities. Certainly by this criterion there is no excuse for deferring a part of the decrease in possibilities by the averaging technique. This criterion, moreover, seems to justify the current trend toward showing all such decreases as deductions from gross income and not as surplus adjustments. These direct adjustments to surplus tend to offset income figures which are higher than the total amount that could be consumed and are therefore undesirable.

Let us now turn to the problem of expected idleness. Suppose now that the building was constructed with the expectation that it would yield five years of service, though its physical life is expected to be twenty years. This stand-by or peak-load asset would, of course, be purchased or constructed only if the expected addition to total plant revenues would, during the five operating years, more than cover the original cost, operating outlays, and interest. To simplify the case, suppose further that the firm thinks it knows for

which five of the twenty years the extra facilities will be necessary. We now have a situation in which the total possible service would be for a period of twenty years with the expectation that only five years will require the services. The question is an old one and a common one: Should the asset be depreciated over the entire twenty years or during only the five years of usefulness?

The older rule of "decline in value" suggests a write-off over the entire twenty years. The use of orthodox replacement cost, when the change in "value" is measured periodically by reference to outside markets for similar used goods, would also indicate the use of twenty years. The benefit doctrine, on the other hand, would call for the use of the five years in which the services are received. The assumption of income as the measure of the amount which may be consumed may also be applied to this problem. The earning possibilities of the enterprise (other things being equal) are undoubtedly less after the passage of the period if these possibilities are measured from the ideal standard of what could be derived from the assets under perfect market and operating conditions. Yet this approach carries the flavor of determining the handling of the profit-reporting of a particular firm by reference to situations which were never anticipated and were never in fact available to the firm. It is even possible to argue that when there are no decreases in expectations the assets become more, and not less, valuable through the operation of the interest factor.<sup>9</sup> The loss of uniformity and conciseness through the increased influence of expectations is an opposing consideration of some force that must be admitted.

<sup>9</sup> For some aspects of this problem see, H. R. Hatfield, *Accounting* (Appleton, 1927) pp. 130-131; Maurice Moonitz and E. Cary Brown, "The Annuity Method of Estimating Depreciation," *THE ACCOUNTING REVIEW*, December, 1939, pp. 424 ff.; J. R. Hicks, "Maintaining Capital Intact: a Further Suggestion," *Economica* (London) May, 1942, p. 179.

Suppose that a year passes in which the originally planned operation of the asset does not occur. It now becomes apparent that only four-fifths of the original estimated services is going to be utilized, and it is also clear that the expected earning possibilities can be maintained only by impounding some of the revenue funds to make up for the loss of expectations.

The general question of permitting possible, but unaccepted, alternatives to influence the initial recording and subsequent disposition of transactions actually concluded seems in need of further attention. As a matter of fact, some kind of accounting based on the opportunities for profit which were missed might be a much better means of testing the performance of management. Regular income accounting might, for example, report a net income of \$1,000,000, which with regard to other apparent facts might be considered a laudable managerial result. On the other hand, it may well be possible that some alternative course of action by management would have led to a much larger net income. While the accounting staff may make limited studies of this nature, it should be obvious that the number of such comparisons that could be made prohibits their general use. Even comparison of overall profit of enterprise with possible profit from other activities is usually left for those to make who wish these special studies. In view of the numerous complications, it is not surprising that accountants limit their activities to enterprise transactions and call on "outside" considerations only when the transaction itself leaves undetermined the amounts for initial entry.

The arguments of this paper may be summarized. It is maintained, first, that we should have some concept of the income we are trying to measure. Unless we are to revert to sterile scholasticism, the definition of the concept should bear some

relation to the purposes to which the results are to be put. The chief purpose for the computations of periodic income is that they may be used as guides to income consumption or to income distribution. While it might be possible to define and recognize income only after the facilities of the concern have doubled (or changed in some other stated way), it seems thoroughly reasonable to measure income or loss from that position which maintains the firm's *status quo* with regard to future earning power. Vehement statements that certain inventory methods and other cost-apportioning devices tend to stabilize artificially the income stream are clearly without definitive meanings until we agree on the nature of the variable to be measured.

To the first-in, last-out advocate, the pertinent "expense" to be subtracted before declaring a distributable surplus is that amount which would replace the

physical facilities for producing future income. (This method provides, in fact, for some flexibility in adjusting physical facilities to changing demand through the fund aspect of the receipts.) To be consistent, these advocates should argue that depreciation be taken on the expected replacement cost of assets rather than on original cost or on replacement costs at certain interim dates. After presenting a discussion of that approach to depreciation this paper proceeds to the problem of periodic depreciation apportionment. The so-called "benefit theory" is usually advanced as a basis for evaluation of the various methods of apportionment; but there is little reason for permitting a vague feeling of fairness to determine income policy. The benefit theory even when applied to the taxation of individuals is not above severe criticism. When applied to a succession of impersonal periods, this ethical feeling has still less to justify support.

## CURRENT PROBLEMS IN COST DETERMINATIONS

PAUL GRADY

IN THE belief that a discussion of some of the problems and experiences encountered during my association of a little over a year with the Cost Inspection Division of the Navy Department may be of interest, I shall deal briefly with a few of the high lights relating to Cost Inspection. Then I shall comment upon the more current problems involved in government contract terminations, as well as upon certain other matters which may be included in a broad view of the subject of cost determinations.

### COST INSPECTION

In placing contracts for the tremendous quantities of equipment and materials

needed to meet the requirements of war, the Navy Department, as well as other government departments, used the cost-plus-fixed-fee type of contract extensively. This type of contract requires continuous audit of the costs incurred by the contractor as a necessary part of the procurement and payment procedures. The performance of this audit work for all Navy cost-plus-fixed-fee contracts constituted the major portion of the work-load of the Cost Inspection Division.

In organizing to meet this responsibility three primary phases required attention:

- (1) The development of a sound plan of organization structure for the

Washington office and for the field offices in the various Naval Districts of the country.

- (2) The recruiting of experienced and unqualified accounting personnel.
- (3) The preparation of a codified and understandable manual of instructions for the guidance of cost inspection personnel.

The first two points do not involve matters of direct accounting interest and need no further comment. The cost inspection manuals previously in use consisted of voluminous memoranda and bulletins issued by the Bureau of Supplies and Accounts and by the Compensation Board. There was no adequate indexing system and no method of discarding superseded instructions. The revised manual was arranged by logical sections to cover auditing, accounting, and administrative matters, each being preceded by a comprehensive index. The manual was designed in loose-leaf form to facilitate subsequent revisions of individual pages or sections.

The general concept of auditing which had developed over a period of years in the various government departments consisted of obtaining originals and numerous copies of all documents relating to the contractors' transactions under the contract, making a detailed check of all such documents, and, in most cases, maintaining registers and ledgers to record and summarize the documents. This system, while contrary to the modern practice of planning the audit program on the basis of selective tests, the extent to be determined by the effectiveness of the company's system of internal control, was so firmly embedded as to constitute a sizable obstacle to the preparation of new auditing instructions. The persistence of those who believed in the soundness of the selective-test approach, together with the fact that there were not sufficient accountants in the country to cover the tremendous volume

of contracts on a detailed basis, caused the selective-test method to be adopted by the Cost Inspection Division of the Navy. The audit instructions of the revised manual were issued to the cost inspection personnel on July 15, 1942. The audit manual issued by the Army approximately one month later likewise incorporated the selective-test method. The adoption of this method has unquestionably resulted in savings in man power measurable in thousands as compared with the personnel which would have been required under the more detailed programs previously in use.

The accounting section of the manual was designed to indicate broadly the accounting principles which are acceptable for the determination of cost under Navy contracts, the items which are inadmissible, and those which are subject to limitation as to their admissibility. In the early part of 1942, practically all the Navy cost-plus-fixed-fee contracts incorporated T.D. 5,000 as a basis for determination of costs. It seemed to many of us in the Cost Inspection Division that the pamphlet, *Explanation of Principles for Determination of Costs under Government Contracts*, which had been prepared by two well-known accounting consultants to the War Production Board, was much clearer than T.D. 5,000. Accordingly, we were instrumental in obtaining the issuance of a directive from the Office of the Secretary of the Navy which recommended that the "Explanations" pamphlet be used in all future cost-type contracts. Although this pamphlet was never officially adopted by the War Department, I am glad to say that, as a result of close coöperation between the Cost Inspection Division of the Navy and the officers charged with the comparable responsibility in the Army, all points of difference in principle as to admissible costs were removed prior to the time I left Washington, and I am sure that condition still prevails.

In the practical performance of the work there was, of course, a continuous procession of interesting problems and questions. Some of them which involved preposterous claims of contractors were necessarily disallowed, and a relatively few which involved fraud were turned over to the Department of Justice. Others involved items of legitimate and reasonable costs as to which representatives of the Cost Inspection Division had taken too narrow a view in the determination of admissible costs. Comments will be presented on certain points in this last category because the extent to which incorrect views prevailed indicates a correspondingly wide misunderstanding of the conventional and utilitarian nature of accounting.

One of the most troublesome points, as was to be expected, was the distribution of overhead expenses. There were many contracts covering the construction of plants or installation of facilities to be paid for by the government without profit to the prime contractor, who also had the contract to operate the facilities. It had been held in all these cases that overhead could not be allowed the contractor, because such an allowance would constitute an effective profit through the reduction of overhead otherwise chargeable to other phases of the business. Such a ruling might have been reasonable in a case in which practically all the work was performed under subcontract by others, but it was wholly unsound and inequitable in case the prime contractor had carried out a considerable portion of the manufacturing, engineering, and installation work. The advocates of disallowance also based their case on the so-called "incremental" method of overhead distribution, which is often followed in the industrial field. However, it was pointed out to them that although such a method may be justified—on the basis of convenience and conservatism—

in the distribution of charges as between the fixed assets to be owned by the corporation and its operating expenses, it would be highly inequitable in the determination of cost of fixed assets which are being manufactured or constructed for others under a cost-type contract. We were also able to demonstrate that, as a result of following this method, many contractors who were given options to acquire the government facilities at depreciated cost would be getting a very favorable deal because practically all other operations were being performed under other government cost-plus-fixed-fee contracts. The disallowance of all overheads under the facilities contracts would necessarily have meant the allowance of correspondingly greater overheads under the production contracts. These examples and persistent argument finally won the establishment of the more factual allocation method for distribution of overheads.

There were some amusing incidents with respect to the application of overhead expense. I recall a few cases in which the contractors, as a result of the new conditions of operating under government contracts, had instituted time records for all overhead personnel in order to have adequate proof and support for their charges. Imagine their consternation when they were advised by the Cost Inspectors that all their overhead had been disallowed because they had not followed the generally accepted methods of distributing overhead on some percentage basis. I hasten to add that these men were not typical of the general run of our Navy Cost Inspectors; they obviously had never asked nor answered for themselves the basic "Q.E.D." of the accounting process.

Other troublesome problems, which required considerable time and work in the development of satisfactory rulings as to admissibility under cost-plus-fixed-fee contracts, had to do with Federal capital-

stock taxes, depreciation on company-owned emergency plant facilities, and materials and services supplied by affiliates or divisions of contractors. Time will not permit discussion of these points.

You are undoubtedly familiar with the detailed and voluminous documents required by the General Accounting Office of the government in support of public vouchers under cost-type contracts. The Cost Inspection Division of the Navy made a great effort to demonstrate the burdensome and unnecessary nature of these requirements, and to point out a more effective and economical method of meeting the responsibilities of the General Accounting Office with respect to these governmental expenditures. Although we were unsuccessful in obtaining the adoption of our suggested procedure, the General Accounting Office, through the establishment of field offices, made it possible to avoid shipping to Washington the major portion of the many tons which these documents aggregate each month. The ultimate disposition of the documents after the end of the war has not been determined.

Experience with various methods of paying compensation to contractors convinced the Cost Inspection Division that some method of fixed-price compensation is always more satisfactory than provision for compensation on a cost basis or cost-plus-fixed-fee basis. Our primary objections to the cost-type contracts were that little or no incentive is offered to the contractor to reduce costs, and such contracts are much more expensive and difficult to administer than fixed-price contracts. Accordingly, we undertook the preparation of a proposed directive providing for the discontinuance of cost-type contracts in the future and for the gradual conversion of all such contracts already in existence. In order to be of maximum assistance to procurement officers, the directive included about six different illustrations of

possibilities of handling compensation provisions, to cover even those cases in which the contractor lacks production experience or other factors require some degree of flexibility in the arrangement for compensation. The directive was issued by the Secretary of the Navy to all Bureaus, Boards, and Offices of the Navy Department in the early part of 1943. Subsequent events, including the recent man-power study by Mr. Baruch, have deepened my feeling that the directive for the discontinuance of cost and cost-plus-fixed-fee contracts was the most constructive contribution made by the Cost Inspection Division during my stay in Washington.

#### TERMINATION OF GOVERNMENT CONTRACTS

Information recently released by government departments indicates that, because of the shifting requirements of the war, a greater dollar volume of contracts has already been terminated than was cancelled after the close of the World War I. These interim terminations furnish a valuable preview of the nature of the detailed problems to be faced in the general termination program at the end of the war; but the magnitude of the latter program both in the volume of administrative work involved and in its repercussions on the economic structure of the country must at the present time remain largely a subject for the imagination.

Legal counsel for the procurement agencies of the government have been engaged for many months in drafting and re-drafting proposed standard termination provisions for government contracts. It is my understanding that standard termination provisions have not yet been adopted; however, the substance of the proposed provisions is incorporated in procurement regulations and will undoubtedly be widely followed by contracting officers and by government auditors. The procurement

regulations (324 and 324.1) now in effect provide for two forms of settlement of fixed-price contracts, namely, negotiated settlement and formula settlement.

Under the negotiated settlement the government agrees to pay the contractor the contract price for all finished products for which payment has not previously been made. In addition to, but without duplication of the foregoing payments, the government agrees to pay such a sum as the contracting officer and the contractor may decide "... is reasonably necessary to compensate the contractor for his costs, expenditures, liabilities, and commitments and work in respect to the uncompleted portion of the contract." There shall also be included a reasonable allowance for anticipated profit with respect to the uncompleted portion of the contract.

If the Contracting Officer and the Contractor, within 90 days from the effective date of the notice of termination or within such extended period as may be agreed upon between them, cannot agree upon the sum payable for the uncompleted portion of the contract, reimbursement shall be in accordance with the following provisions (taken from paragraphs D and E of P.R. 324):

"(1) By reimbursing the Contractor for all actual expenditures and costs certified by the Contracting Officer as having been made or incurred with respect to the uncompleted portion of the contract;

"(2) By reimbursing, or providing for the payment or reimbursement of, the Contractor for all expenditures made and costs incurred with the prior-written approval of the Contracting Officer in settling or discharging that portion of the outstanding obligations or commitments of the Contractor which had been incurred or entered into with respect to the uncompleted portion of the contract; and

"(3) By paying the Contractor, as a profit on the uncompleted portion of the contract in so far as a profit is realized hereunder, a sum to be computed by the Contracting Officer in the following manner:

"(A) The Contracting Officer shall estimate

the profit which would have been realized on the uncompleted portion of the contract if the contract had been completed and labor and material costs prevailing at the date of termination had remained in effect.

"(B) Estimate, from a consideration of all relevant factors, the percentage of completion of the uncompleted portion of the contract.

"(C) Multiply the anticipated profit determined under (A) by the percentage determined under (B). The result is the amount to be paid to the Contractor as a proportionate share of profit, if any, as above provided.

"Notwithstanding the above provisions, no compensation shall be paid under this Paragraph (d) by way of reimbursement for expenditure including expenditures made in settling or discharging obligations or commitments, or by way of profit on account of supplies and other things which are undeliverable because of destruction or damage, whether or not because of the fault of the Contractor.

"(e) The Government shall pay to the Contractor such sum as the Contracting Officer and the Contractor may agree upon for expenditures made and costs incurred with the approval of the Contracting Officer (a) after the date of termination for the protection of Government property, and (b) for such other expenditures and costs as may be necessary in connection with the settlement of this contract, and in the absence of such agreement as to the amount of such expenditures and costs shall reimburse the Contractor for the same."

It will be observed that many of the elements included in the formula are not definitive and will require negotiation and settlement between the contractor and the government. The principal value of the formula is that the settlement problem is reduced to its basic elements, which should greatly facilitate ultimate consummation on an over-all negotiated-settlement basis.

The more difficult problems involved in the termination settlements will undoubtedly relate to:

- (1) Settlement of subcontractors' claims
- (2) Distribution of overhead items
- (3) Disposal of inventories

The establishment of accounting procedures to control and support the costs of individual contracts is an essential re-

quirement to an orderly and expeditious handling of the vast volume of terminations which will occur at the cessation of hostilities. This tremendous cost accounting assignment represents a challenge to the internal accounting organizations of American industry and to members of the public accounting profession who act as advisers and independent auditors. It also offers a corresponding opportunity to demonstrate the broad usefulness of accounting in the economic and social structure of the country.

In the preparations of the government for meeting the termination problem, it has seemed to me that an undue amount of effort has been spent in attempting to define, in the proposed standard contract provisions, various elements of cost which may be allowed in the formula basis of settlement. Regardless of the extent of the definitions, this is a matter which should be determined by accounting and business judgment based upon generally accepted accounting standards as applied to the particular circumstances. The crux of the termination problem, in my opinion, is one of administration. Accordingly, it is to be hoped that immediate steps will be taken to create adequate organizations within the principal procurement agencies to handle the termination program. Terminations should be handled on an over-all, as distinguished from an individual-contract, basis by assigning the negotiations to the branch of the service having the predominant interest. The activities of the Price Adjustment Boards and of the Cost Inspection Services and, in fact, of the whole procurement group will tend to become more and more merged into the termination problem as the war grinds to its end. It seems that with proper planning, perhaps involving a merger of the personnel of these separate sections, it should be possible to create an effective organization within each of the major services to insure

reasonable speed in the settlement of terminated contracts. The prevention of delay and uncertainty is of vital importance to the economic welfare of the nation in the reconversion period after the war.

#### ORIGINAL COST OF UTILITY PROPERTIES

Turning to a field not directly related to foreign hostilities (although the Federal Power Commission has held that it is essential to the war effort), many interesting cost determination problems have developed in the compliance with new uniform systems of accounts promulgated by Regulatory Commissions beginning in 1936. These classifications provide that property acquisitions shall be analyzed in order to determine the original cost (defined to mean the cost of the property to the person who first devoted it to the public service) of tangible properties and intangibles and, wherever practicable, to determine the nature of the elements responsible for the difference between the cost of acquisition to the company and the original cost. The systems of accounts also provide that the original costs shall be recorded in certain detailed classified accounts and that the difference between original cost and amounts shown by the books shall be recorded in plant adjustment accounts, to be depreciated, amortized, or otherwise disposed of as the Commissions may approve or direct.

In an action brought by the American Telephone and Telegraph Company in 1936 relating to the system of accounts prescribed by the Federal Communications Commission, the Supreme Court, to avoid the possibility of misunderstanding and to give adequate assurance to the companies as to the practice to be followed, requested the Assistant Attorney General to reduce to writing, on behalf of the Commission, certain statements in regard to the disposition of the property adjustment accounts. In the statement filed pursuant to this

request, which the Court accepted as an "... administrative construction binding upon the Commission in its future dealings with the companies," the Commission undertook in substance that assets of continuing value reflected in the adjustment accounts would be retained therein until the assets should cease to exist or be retired, and that provision would be made for their amortization. It should be noted that this construction relates to the entire plant adjustment account which, of course, includes both tangibles and intangibles. In the decision of the Court Justice Cardozo stated: "The administrative construction now affixed to the contested order devalitizes the objection that the difference between present value and original cost is withdrawn from recognition as a legitimate investment."

It seemed clear to me at that time that the authority of the Commissions, under the systems of accounts, to force the write-off of cost of tangible properties included in the adjustment account, except by amortization over the life thereof, and the write-off of cost of intangibles of continuing value had been considerably abridged by the administrative construction and the Supreme Court decision. However, subsequent action by the Commissions, particularly the Federal Power Commission, indicates that a more realistic view may have been expressed in an editorial which appeared in the British magazine *The Accountant* in 1937. The portion of the editorial which relates to the disposition of the property adjustment accounts follows:

"It is at the point where the court deals with this objection that the English reader finds difficulty in appreciating the terse style adopted by American judges as contrasted with the more literary eloquence of their English brethren. The American court fell back on the vague principle of 'administrative construction.' It called upon the commission's chief accountant who testified that the amount carried to suspense 'would be disposed of, after the character of the items had

been determined, in a manner consistent with the general rules underlying the uniform system of accounts for the distribution of expenditures, according to their character, to operating expenses, income, surplus or remain an investment.' We hope we may be pardoned for the comment that this language seems perilously like the gift of a stone in response to a request for bread. Nor was the assistant-attorney-general much more specific when he stated that the commission construed the provision as meaning 'that amounts included in the account that are deemed, after a fair consideration of all the circumstances, to represent an investment which the accounting company has made in assets of continuing value will be retained in that account until such assets cease to exist or are retired; and in accordance with the regulations provision will be made for their amortization.'

"The American court did not share our qualms and decided that 'we accept this declaration as an administrative construction binding upon the commission in its future dealings with the company.' We should have been better pleased had the court obtained a precise definition of 'continuing value.'

"We realize that we cannot set ourselves up as censors of American conditions, but when we consider that the entire public-utility industry of the United States is likely to be subject to these highly controversial views of accounting we cannot wonder that American accountants are themselves somewhat aghast. The bookkeeping difficulties involved are too obvious to need explanation and we should have thought that if the authorities desired to place their own interpretation on the highly ambiguous word 'value' they might have secured their ends by calling for a reanalysis of balance-sheet figures in the form of a memorandum statement. On the other hand, to impose on companies financed by private capital the obligation to place a connotation on 'value' irrespective even of changes in money levels over prolonged periods of time is, from the English viewpoint, highly arbitrary; and we can understand the reluctance of business men, conversant with the details of their own affairs, to submit the financial fortunes of their undertakings to the academic opinion of semi-public officials seated in the inaccessibility of government offices.

"The whole matter seems to us to provide a crucial illustration of the dangers of government by administrative order, not without its lessons on this side of the Atlantic, and to prove that capitalism can be killed as easily by the American recipe as by the Russian."

The following practices of the Commission are, in my opinion, subject to criticism from the standpoint both of accounting and of equitable principles:

- (1) In the determination of original cost the Commission insists on the removal of all items not now regarded as properly to be included in plant account, on the basis that accounting errors should be corrected; but it will not permit the inclusion of items originally charged to expense which actually are proper capital expenditures under the provisions of the new system of accounts, on the theory that the company made an election of an accounting procedure at the time of the transaction to which it is irrevocably bound.
- (2) Contrary to the provision of the uniform system of accounts, the Commission seems to discourage the separate identification of the portion of the property-acquisition adjustment account representing investment in tangible properties and that representing intangibles, thus preventing the proper accounting for the company's own investment.
- (3) The Commission has taken the position in most instances that the entire property-acquisition adjustment account should be written off to surplus immediately or should be amortized by charges to other income deductions over a relatively short period of years.

An equitable and objective approach to the problem of original cost might well embrace the following considerations:

- (1) In compiling the original costs of utility properties it is important to bear in mind that the procedures of a corporation in allocation of charges as between property accounts and operating expenses must

be regarded as a whole. In comparing the accounts of two corporations it is common to find that one is more conservative in one respect and less conservative in another; one may capitalize more overhead expenses but charge fewer border-line items to fixed-capital accounts. Accounting errors (if of substance) should be corrected, whether such corrections increase or decrease the property accounts. It is obvious that a unilateral correction of downward errors will result in a determination of original cost or recorded amount, whichever the lower, although this is not the stated objective of the uniform system of accounts, and is of no usefulness in determining the rate base.

- (2) The establishment of original cost as the primary basis for the maintenance of detailed classified plant accounts under the uniform system of accounts does not imply any departure from the generally accepted principle that corporate accounting should be based on cost to the corporation. The provision for the maintenance of this statistical information in the accounts, as an exercise of regulatory authority, does not lessen the responsibility of the company properly to account for its own investment in fixed-asset accounts. It necessarily follows that the various elements included in the property-acquisition adjustment account must be handled in such manner that the data contained in this account, in combination with the data recorded in the detailed classified accounts, will set forth the investment of the company in various classes of tangible properties and in intangibles of continuing value, not only at the time when original cost is first set

up on the books but at all times thereafter.

- (3) The portion of the investment in tangible depreciable properties included in the plant-acquisition adjustment accounts should be depreciated or amortized under the same policy as is applied to the portion of the investment reflected in the primary classified accounts. The portion, if any, representing investment in land need not be depreciated or written off unless there is a permanent loss of usefulness and value. With respect to the portion of the acquisition adjustment account which represents the legitimate cost of intangibles or going-concern value, there is no requirement from the standpoint of generally accepted accounting practice that such investment be written off to surplus or amortized by annual charges to income, so long as the investment is reasonably supported by the earning capacity of the enterprise.

The question of writing off intangibles is one of rather broad significance which

would require many pages for the development of its various aspects. While any adequate treatment of the subject is beyond the scope of this paper, it should be observed, in closing, that the categorical position taken by the Federal Power Commission in various cases in making the write-off of intangibles a mandatory accounting requirement is not supported by accounting literature or accounting practice. Many accountants have recommended the writing off of intangibles, particularly in the industrial field, solely on the basis of conservatism. However, this falls far short of establishing the practice on a mandatory basis. It seems that in regulated industries the reason for retaining the investment in intangibles in the fixed capital accounts is stronger than in the competitive field, because the entire investment, both tangible and intangible, is permanently devoted to the public service and the utility is entitled only to an opportunity to earn a return on the total investment, and ordinarily may not expect any part of the capital so invested to be returned and made available for other uses.

## THE FUNCTION OF INDUSTRIAL CONTROLLERSHIP

DAVID R. ANDERSON

**M**Y PURPOSE is to present to readers whose interests lie largely in the field of accounting education a controller's ideas of the nature of the controllership function and its place in industry. This does not seem, on the surface, like a difficult task; surely, anyone who has been a controller for any length of time should have a pretty clear picture in his mind of his job and of his function in

the business world and in the general social scheme. Yet I have to begin my remarks by admitting that I am not able to give you a precise and clear-cut definition of controllership, and I suspect that the difficulty of defining the function precisely is the real reason for the teacher's present interest in the subject.

The law, which might be expected to have something to say, at least as to the

obligations and responsibilities of controllers, gives us little or no help; Mr. Nathan Isaacs, Professor of Business Law at the Harvard Graduate School of Business Administration, said, in an address in February, 1940, that nowhere in Federal or state law is the word "controller" defined as involving any particular set of functions, and that although the law is beginning to recognize controllership, without actually defining it, the responsibilities, obligations, and liabilities of the controller in any particular company depend on his contract with the directors, whether that "contract" be expressly defined or simply implied by custom or precedent.

And when we turn to custom and precedent we find that the controllership function is in a state of evolution and development, and that there is a truly amazing variety in the nature and scope of the controller's duties and the importance of his job in different companies. The available literature on the subject is not very extensive; you are familiar, no doubt, with the check list of controller's duties published by the Controllers Institute of America, and with the survey made in 1935 by the Policyholders Service Bureau of the Metropolitan Life Insurance Company with the cooperation of the Institute. A study of these documents and of articles on the subject which have appeared from time to time in the periodicals published by the Controllers Institute and others will be very helpful in acquiring background as to how controllers are actually functioning in business today and what they and others believe to be their duties and responsibilities. But it seems to me that a broader view is required if we are to understand the real nature and essence of the controllership function, of which these duties and responsibilities are merely aspects or manifestations; and I believe that it is possible to achieve this broader view by reviewing the way in which the

controllership function has developed, and analyzing the nature of the services it is being called on to render to business today.

*Origin and Development of Controllership.* I think you will find it true that in most business enterprises the organization of responsibilities tends to vary with the capacities, and perhaps with the interests, of the individuals who make up the executive "team," and, furthermore, that the higher you go in the scale of responsibilities, the more likely you are to find this kind of variation. This, it seems to me, is an inevitable and a desirable condition, for it is usually easier to adapt organization to human capacities than to attempt to mold people to fit a rigid organization plan. This process of adaptation cannot, of course, be carried too far, as there are certain principles of organization which are basic and which must be observed if management is to function effectively, but the area of possible variation is rather broad. And so we often find controllers performing duties which seem to be clearly extraneous to their function as it is generally understood, and in many cases it seems that these duties are assigned to them simply for lack of a better place in the organization to unload them. But if, in studying the information available as to how controllers are actually functioning in industry, we eliminate miscellaneous and occasional duties of this sort, I think it becomes evident that the essential duties of controllership are all aspects of one basic function—preparing and keeping the records of the business and reporting and interpreting the information which they contain. I use the term "records" in its broadest sense, to include not only the books of account, but also the original documents, such as sales and purchase invoices, vouchers, checks, etc., and the supplementary statistical analyses and tabulations prepared from them, and the budgets, which represent the recorded operating plans of the business.

Superficially, this simplified statement of the controller's function may seem to minimize the importance of his position by assigning him the status of a bookkeeper or chief clerk, and there is no doubt that the bookkeeper of the days of high desks and elegant Spencerian penmanship is the authentic ancestor of the controller of today. But the evolution of this particular species has been so rapid that the ancestor would have difficulty in detecting in his descendant any trace of family resemblance—indeed, it can be said that the parent would have difficulty in recognizing his child. This rapid evolution has paralleled, and is in fact a part of, the evolution of industry itself; the tremendous expansion in the scope and complexity of business activities in the past twenty-five years, the increasing severity of competition, and the growth of public ownership of and interest in business enterprises have all placed heavy added responsibilities on business management; and management, no longer able to rely on personal supervision of the activities under its direction, has turned to the accounts and records for the facts it must have to act intelligently. This has led naturally to an increase in the volume, variety, and complexity of business records, and, even more important, to an increasing emphasis on the reporting and interpreting function, as distinct from the purely recording function, and hence to the development of controllorship as a real factor in management.

The pattern of this development has not been at all uniform—in many organizations the reporting and interpreting function has been separated entirely from the recording function, and the latter has, in some cases, been further divided between original recording and auditing, with the controller's responsibility sometimes restricted to one or two of these subdivisions of the complete function, and sometimes spanning all of them. The con-

siderable degree of confusion that exists today as to the exact nature of the controller's job is largely due to these variations in the subdivision of the original function and in the assignment of its different parts.

*Sub-functions of Controllorship.* I think it is clear, from my remarks so far, that I do not believe it practicable to lay down a definition of the controller's job that will fit all sizes and types of business and all organizations. I do believe, however, that it is possible to define very clearly the objectives of the record-keeping and reporting function. At the risk, perhaps, of oversimplification, I would say that, broadly speaking, there are just three such objectives, which might be called the sub-functions of controllorship; they are,

1. Protection of the assets of the business.
2. Compliance with legal reporting and record-keeping requirements.
3. Assistance to management in formulating policies and controlling operations.

Of these three broad sub-functions of controllorship, the first-named, protection of the assets of the business, might, without minimizing its importance, be called the purely "accounting" function, using the term "accounting" in its limited sense, as when we speak of accounting for a sum of money, or for other property. It covers such elementary requirements as keeping accounts with customers, control of cash receipts and expenditures, proper recording of merchandise inventories and plant assets—in other words, the minimum records necessary to insure against loss to the business through error or fraud. Until rather recently, this was perhaps the major purpose of the record-keeping function, and the proper discharge of this function in a large organization today requires not only a high degree of efficiency in the mechanics of record-keeping, but also con-

siderable judgment and skill in planning the records and setting up the organization to operate them.

Compliance with legal reporting and record-keeping requirements, which may be called, for convenience, the "legal" function of record-keeping, is the most recent in origin of these three sub-functions, but by its very nature it is the most imperative. Tax returns *must* be filed, companies with listed securities *must* report to the Securities and Exchange Commission, government questionnaires *must* be answered, and records *must* be kept for these purposes. These returns and reports are increasing in number and complexity year by year as laws and regulations grow more and more intricate and "clever." It happens that I am in a business which has extensive cotton textile operations, and I well remember that in 1936 it seemed to me that the ultimate in intricacy and complication had been achieved in the so-called "Unjust Enrichment Tax" law. But it is apparent now that that was just a kind of preliminary workout for the legal technicians, for the Unjust Enrichment Tax law is a child's primer as compared with the Revenue Act of 1942. And the end is not yet.

The third of the sub-functions named—assistance to the management in formulating policies and controlling operations—covers a very broad field, including not only the use of the actual records of the business for this purpose, but also the summarizing and recording of business plans in the form of the budget, and in some cases the analysis and interpretation of external data which may have a bearing on managerial policy. This "management" function of controllership has always existed in some degree, but for many years it was limited to the preparation of a balance sheet and a simple profit and loss statement, which were usually available only at the end of the year after a physical

inventory had been taken and the books had been audited by a public accountant. Today management needs and demands prompt and complete information about every phase of business operations, and it is this demand which has so completely transformed the record-keeping function and given the controller the opportunity to make a dynamic and constructive contribution to the success of his own organization and to general economic progress.

*Fundamental Organization Problems.* It seems obvious, even from this brief summary, that the objectives of these three sub-functions—which I have termed the "accounting," "legal," and "management" functions—are really quite distinct, even though they all stem from the one broad function of record-keeping, and that each of them may call for different types or forms of secondary or summary records, though all must depend on the same primary or original records. Even more important is the fact that the most effective discharge of each of these functions requires a different approach, a different habit of thought, and a different attitude of mind. What does this mean to the controller?

In a small organization, where he must necessarily perform all these functions himself, it means that he must recognize his problem, and be versatile in his attitude and approach. In a larger organization he may surrender one or two of the three functions, or, if his work spans them all, he must not only maintain versatility of approach himself but must also have versatility of abilities in his organization, particularly in his direct assistants. I have already indicated my belief that the best solution of the problem in any particular company will depend on the form of its internal organization and the abilities of the available personnel, but there are certain fundamental questions which the controller of any company of medium size

or larger is likely to encounter in orienting himself within his organization and defining his job. I should like to examine these questions briefly, since I believe they throw a good deal of light on the various current views of controllership and the possibilities for its future development.

These fundamental questions may be stated briefly as follows:

(1) In addition to his responsibilities to the management, what responsibilities does the controller have to the directors, the stockholders, and the public? Can one individual span the entire record-keeping function and discharge all these responsibilities?

(2) Is it necessary to remove some part of the record-keeping function from the controller's area of responsibility in order to secure adequate protection of the assets of the business—i.e., adequate internal check?

(3) To what extent, if at all, should the controller assume responsibility for Federal and state tax returns, and for other reports required by governmental authorities?

(4) Should the controller relinquish direct supervision of the keeping of the company's records and confine himself to the analysis and interpretation of operating results as disclosed by the records?

*Responsibility of Controller to Directors, Stockholders, and Public.* The question of the responsibility of the controller to the directors, the stockholders, and the public, as distinct from his responsibilities to management, has received a great deal of attention recently because of the disclosure of fraud in the published statements of several companies. The old-time book-keeper had little responsibility of this kind; he accepted instructions from the management, and had no legal or even moral obligation to question those instructions unless they involved flagrant and patent fraud. But, along with a growing recog-

nition of the right of stockholders (and, in the case of listed companies, the right of the public) to accurate and dependable information about corporate operations there has developed on the part of controllers an increasing sense of responsibility for the published reports of their companies. The limits of this responsibility have not been clearly defined, and perhaps some controllers have felt that examination by an independent public accountant relieved them of the greater part of the burden of this obligation. But there is no doubt that, in the last seven or eight years particularly, managements have been relying more and more on their controllers for compliance not only with the letter of the various laws which have been passed to protect the stockholder and the investor, but also with the principles of complete and adequate disclosure which inspired these laws.

The discussions arising out of the McKesson & Robbins case and other less publicized cases in the past few years have served to emphasize and possibly to accentuate this trend, and the public pronouncements of members of the Securities and Exchange Commission and of officials of the New York Stock Exchange<sup>1</sup> have made it clear that those bodies look primarily to corporate management for accuracy and completeness in the published reports of listed companies, and that they consider the certificate of the independent public accountant as a necessary but secondary check which does not in any way relieve management of its primary responsibility. These pronouncements from such high sources, which specifically named the controller as the logical representative

<sup>1</sup> See the address of Robert E. Healy, May 15, 1939, reprinted in *The Controller* for June, 1939; the address of Jerome E. Frank, October 10, 1939, reprinted in the 1939 *Year Book of the Controllers Institute of America*; the address of William W. Wernitz, June 7, 1940, reprinted in *The Controller* for July, 1940; the report of the New York Stock Exchange's Committee on Stock List, approved by the Exchange's Board of Governors on August 23, 1939, on the subject of "Audits and Audit Procedure."

of management in carrying out this responsibility, focused the attention of management and of the public on the importance of this phase of the controller's function, and many managements took steps to strengthen the hands of the controllers in their organizations and to give them definite authority commensurate with these responsibilities.

This development was undoubtedly sound from all viewpoints, but at the same time controllers found themselves faced with an apparent belief in some quarters that the controllership function should be set up as a check on management itself, a sort of internal policing function, responsible not to management but directly to the board of directors or even to the stockholders. That this proposal, which seemed to involve a more or less complete separation of the controller from management, was not pleasing to controllers themselves was evident from the discussions and correspondence on the subject recorded in *The Controller*, the official organ of the Controllers Institute of America.<sup>2</sup> From these discussions it appears that controllers consider that their own best interests lie in keeping the controllership function as an integral part of management organization, and that they are reluctant to accept any definition of their responsibilities which is at variance with this fundamental concept. But irrespective of what controllers may believe to be their own best interests, the question may properly be asked whether the responsibility of the controller, as apparently visualized in these pronouncements of government and stock exchange officials, can be effectively discharged by an individual who is also a working member of the management group, and who assists in the formation of operating policies and reports on and interprets

the results of those policies for the management.

This question is one which cannot be answered categorically and finally at the present time. There are those who anticipate a marked growth in the importance of this phase of controllership as time goes on and the "partnership" of government and business develops and becomes more clearly defined. If, as some intelligent persons believe, we are in a transition stage, and if, when V-Day is behind us, we find ourselves facing a different world, with further changes in our inherited ideas of how business should be operated, it may be necessary to make a sharp distinction between this "public" responsibility of controllership and its internal or management responsibilities. The question is an interesting and important one, but it is beyond the scope of this discussion to do more than point it out and say that controllers must keep their minds open and prepare themselves mentally to cope with such developments as they occur. For the present we have to deal with the situation as it exists in business today—and it is my opinion that the controller, if he has a complete and clear understanding of his responsibilities and the ability to cooperate with the other members of his organization, can discharge his responsibilities to the public as a member and representative of management, and that separation of the controllership function from the management is neither necessary nor desirable.

The election of the controller by the board of directors may be helpful in giving him the definite authority and standing he needs to keep his trust to the public and at the same time serve his management; but it is the way in which he uses this authority that will determine his success in discharging his dual responsibility. He must, of course, accept complete responsibility for protecting the stockholders from

<sup>2</sup> See issues of June to October, 1939; also in the issue for January, 1940, "Shall Criminal Responsibilities be Placed on the Controller?" by Wesley Cunningham.

outright fraud, and he must have and exercise freely whatever authority he needs to accomplish this end; but when it comes to the finer questions of adequate disclosure, the final responsibility rests, in the great majority of cases, on the top management. The controller's duty is to make the facts available to the management and to suggest a form of report which he believes will provide the stockholders with adequate information. Although he is rarely in a position to dictate on this point, he can throw his influence with his management on the side of complete disclosure, working from within for the principles he believes to be sound, and of course withdrawing entirely if he finds himself in a position incompatible with his standards of ethics.

A word should be added as to the relationship of the controller and the public accountant in this field. It may appear superficially that there is some duplication or even conflict of responsibility here, but this is not necessarily true. The outside and inside viewpoints can and should supplement and check each other, and with proper coöperation and mutual understanding the controller and the public accountant can each be of genuine assistance to the other in the performance of their respective essential functions.

*Subdivision of Responsibilities for Internal Check.* Entirely aside from the problem of possible conflict between the responsibilities of the controller to the public and to management, it is frequently suggested that a division of the record-keeping function is desirable in order to conform to the fundamental principle of internal control, which requires that the work of each employee be counterchecked by the work of another. The suggestions of the proponents of this viewpoint range all the way from the transfer of the actual handling of cash to the jurisdiction of someone other than the controller—usually the treasurer—to a complete segregation of the

operation of all the company's records from the auditing of those records. One of the most definite statements of the latter proposal was made by Victor H. Stempf in 1939, in a discussion on the general subject of internal auditing, as follows:

"I believe that the controller should design and formulate the methods of accounting to be pursued by the company, but I don't believe that he should be directly responsible for the internal recording of transactions. I think that is an operating function. The ideal setup in a large organization is to have a chief accountant, who reports directly to the general manager and is independent of the controller, and whom the controller checks."<sup>3</sup>

It is difficult to quarrel with the principle of this proposal, although most controllers would probably suggest that if such a segregation of their duties is to be made, it would be more logical to combine the designing, operating, and interpreting of the records under the controller and assign the checking function to an internal auditor who might, if it were considered desirable, report directly to the president or other officer functioning as "general manager." In the same discussion from which the above quotation was taken, the counter-suggestion was advanced that in a large organization the controller is an executive officer, and hence is sufficiently removed from the actual recording of transactions to obviate the necessity of an independent internal auditing function. That this is a widely held point of view is evident from the common practice of having the internal auditor, if there is one, report to the controller.<sup>4</sup> But it cannot be denied that this practice does not of itself afford as complete protection as is obtained when the auditing function is separate and independent.

As a practical matter, however, if an adequate system of internal audit, even

<sup>3</sup> *NACA Yearbook 1939*, pp. 394-395.

<sup>4</sup> See *NACA Bulletin*, June 1, 1939, Section III, pp. 1289-1290.

though under the supervision of the controller, is subjected annually to an intelligent review and test by an independent public accountant, it will be next to impossible for the controller to take unfair advantage of his dual position as recorder and checker of his own recording. It seems, therefore, that the chief advantage of the various proposals for achieving better internal control by subdividing the record-keeping function may be a slight simplification of the task of the independent public accountant in satisfying himself as to the adequacy of such control. Public accountants do not in general seem to find it difficult to cover this phase of their investigations under existing conditions, and in the absence of stronger evidence to the contrary it appears that the natural preference of management for looking to one person to be responsible for the complete record-keeping function, with a periodic check by independent public accountants, does not entail any real loss of protection for the corporate assets.

*Responsibility for Tax Returns and Government Reports.* As taxes have multiplied and tax rates have skyrocketed, and as governmental regulation has extended over an ever-widening area of business operations, what I have called earlier in these remarks the "legal" phase of the record-keeping function has increased tremendously in importance, and in many companies has demanded a larger and larger share of the controller's time and attention. The exact degree of responsibility assumed by the controller for the preparation of tax returns and reports to government agencies varies considerably in different companies; in many cases the controller has full responsibility, in some he has no responsibility at all, and there are various intermediate working arrangements. The tendency to segregate this particular phase of the record-keeping function is undoubtedly due to the fact

that there are legal as well as accounting problems involved. Complete segregation, with the controller assuming little or no responsibility, is most apt to occur when one of the other officers, by reason of legal training and background, is qualified to take over the function and is interested in doing so, or when the size of the corporation is such as to justify a separate tax department.

Some companies lean very heavily on their public accountants for assistance in this field, and many public accounting firms have on their staffs tax specialists with both legal and accounting training who are in a position to render very effective service. I believe, however, that it is a mistake to leave this responsibility entirely in the hands of outside advisers, whether accounting or legal, since the most effective discharge of the function requires not only legal knowledge, experience in dealing with tax administration, and a thorough understanding of accounting principles, but also an intimate acquaintance with the company's operations and records, which in most cases can be supplied only by someone within the organization itself. It is impossible to lay down any rule as to how this combination can be best achieved in any particular company. If the controller has full responsibility, he will, clearly, need constant legal advice and guidance, whereas if the responsibility is assumed by someone whose background is primarily legal, the company will be the loser if it does not utilize the controller's training in accounting and his familiarity with the operating methods, results, and records. This is particularly true because of the necessity of considering in advance the effect of major financial or operating decisions on the company's tax liability, so that transactions may be handled and recorded in the accounts in such a way as to avoid unnecessary tax penalties. Complete and close coöperation between the

controller and the company's legal and accounting advisers is the only adequate answer to this problem, and in order to make such coöperation really effective the controller, though he need not be by any means a trained lawyer, must acquire some legal background and must follow the major trends in tax and regulatory legislation.

*Separation of Operating and Interpreting Aspects of Controllorship.* Another reason frequently advanced for subdividing the record-keeping function in a different way is based on the belief that the controller can render better service to management if he surrenders all line responsibility and acts in a staff capacity, analyzing and interpreting financial and operating results and trends, and perhaps supervising or assisting in the preparation of the budget. This is, of course, a somewhat restricted conception of the controllorship function, and has probably developed as a result of the increasing demands of management for this type of service and a recognition of the differences between the types of mentality best fitted for discharging the several phases of the record-keeping function. This problem was touched on earlier in this article, and the suggestion made that the controller needs to keep clearly in mind the multiple demands of his job, and, in all but the smallest organizations, organize his department with assistants who are equipped by temperament to handle details which he himself has neither the time nor the natural inclination to cover properly.

Most important in this respect, perhaps, in any sizable organization, is a competent office manager to supervise what might be called the "office service" functions, such as order-writing and invoicing, mechanical compilation of statistics, keeping customers' ledger accounts, and the like, and to plan and supervise the installation and maintenance of office methods and equip-

ment. With an able assistant in this department, and a carefully selected and trained "staff" which may consist of any number upward from one, depending on the size of the company and the nature of its operations, the controller who has developed a measure of executive ability should be able to span the record-keeping function in its entirety and still devote the major part of his time to the constructive activities of management service.

It may properly be asked, however: Why expect so much of one individual? Why not split the job up into its recognizably distinct parts? The answer is that in spite of its varied phases, the record-keeping function is essentially a unified responsibility, and from the standpoint of management it is simpler and more direct, if feasible, to look to one man to discharge this responsibility. Furthermore, it is to the advantage of the business that the knowledge and experience of the controller in his distinctly technical field be applied to all problems in that field and that his familiarity with the intimate details of the business be fully utilized. And, finally, the controller himself is better able to understand operating results and to interpret them authoritatively if he has supervised the construction and use of the records, and has direct responsibility for the application of sound accounting principles in the recording of all transactions.

*Controllorship a Dynamic Function.* I hope that out of what I have said so far the reader has been able to see emerging the outlines, at least, of a picture of the controllorship function, and that even though the details of that picture may not appear in sharp focus, it is sufficiently intelligible to give you some feeling of the real nature of the function. Controllorship might be defined rather baldly as the function which embraces the recording and utilization of all of the pertinent facts about a business. That would, I think, be

a reasonably accurate definition, as such definitions go, but it would fall far short of conveying the idea that I should like to present—the idea of controllership as a vital and constructive factor in business management.

Controllership does not mean the routine recording and checking of business transactions and the assembling and reporting of cut-and-dried factual data. At least, it should not mean that, and the controller who is satisfied with that conception of his job simply does not realize any of its real potentialities. When you see that kind of a situation, you will almost always find that someone else in the organization—most often one of the principal executive officers—is carrying the load of the real controllership function, besides his other duties, and usually carrying it less effectively than the controller could if he were alive to his opportunities.

I think that teachers will readily realize the importance of maintaining a balance between specialized technical instruction and the broader phases of education that are necessary to develop in the student the imagination and the sense of orientation and perspective which he must have to make the most effective use of his technical knowledge. My own theory is that this is especially important in the field of accounting, for there is a comforting but illusory definiteness about figures that tends to make us think of them as ends in themselves, unless we read them and use them with a full appreciation of their essential meaning and their limitations. Any cost accountant who has graduated from the novice class knows that when he is asked for a cost of some product or some operation, the first thing to be done is to make sure that he understands for what purpose the cost is to be used; if he neglects to do this, his answer may be utterly misleading. And I am sure that every con-

troller has had the experience of preparing a report which seemed to him and to his immediate associates in the accounting department to be perfectly clear and obvious in its implications, and then discovering that the report meant entirely different things to different individuals in the management group, the impression obtained by each being colored by his background and general viewpoint, and perhaps—human nature being what it is—by his concentration on some particular objective which he had in mind at the moment.

The controller must see to it that the data which he presents to management as a basis for controlling operations and formulating policy are correctly interpreted by those who are guided by them; this requires not only clarity in presentation but also an understanding of the viewpoints of his associates in the management. For an excellent example of the intelligent and effective use of figures in the field of controllership, I refer to an article by E. Stewart Freeman in the January, 1939, issue of *The Controller*, entitled "Cost Analysis Is a Science, but Pricing May Be Classed as an Art." I think this article instructive and refreshing in its approach to an important business problem, and it illustrates perfectly my point that imagination and perspective are essential in the exercise of the controllership function.

What I have just said about the necessity for clear thinking, imagination, and perspective in the "management" function of controllership applies just as much to what I have called the "legal" and "accounting" functions. Tax returns and government questionnaires may appear to be highly formalized, to the point of being "cut-and-dried", but to do an adequate job in the preparation of these reports for any business, it is necessary to have a thorough understanding of the operations of the business and to know a great deal

about the background and the objectives of the laws or regulations under which the reports are required.

In the field of taxation, especially, there are major problems, the solution of which calls for the utmost ingenuity and analytical and constructive ability that the controller can bring to bear on them; an outstanding example, which is very much in the minds of all controllers at the moment, is the preparation of claims for excess profits tax relief under Section 722 of the Revenue Code.

In the purely "accounting" field, in which a great deal of routine is unavoidable, the controller's problem is to inject enough variety and imagination into his approach to keep the routine from becoming a deadly formality, for experience has shown that mere formal routine auditing, however meticulously carried out, is not in itself adequate protection for business assets. And in the discharge of all these functions—accounting, legal, and management—the controller must be adept in dealing with many different types of personality and temperament, which means that he must be tolerant, practical, and flexible in his thinking, while at the same time holding fast to the principles and policies which he knows to be sound.

*The Future of Controllorship.* And now, in conclusion, a brief word as to what the future holds for controllorship. For the past year and a half to two years controllers, like other business executives, have been concentrating largely on war problems: the costing of government contracts, renegotiation, excess profits taxes, and, more recently, war contract cancella-

tion procedures. These will continue to be of major importance through the readjustment period immediately after the war. And what then?

We are hearing a great deal, these days, about the coming test of private enterprise. Responsible business leaders are saying that if private enterprise fails to make the economy of the postwar world function for the good of all the people, the state will take over and democracy as we know it will give way to some form of socialism. This interest in the common good is not starry-eyed idealism on the part of these business leaders, but, to use a term that I believe was first coined by the late E. A. Filene, it is "enlightened selfishness"; it does not imply any change in the primary responsibility of management, which is to conserve the equities entrusted to it, but it does imply a broader vision in the discharge of that responsibility. I shall not try to enlarge on this idea any further, for it covers too broad a field. But I must point out that to do the job ahead, management will need, more than ever, the services of really constructive controllorship.

I have suggested earlier that developments in the relationship between government and business may vitally affect the evolution of the controllorship function, perhaps laying on the controller increased responsibilities to government and to the public. However that may be, controllorship is and will continue to be an indispensable function in business management, and, in tune with the times, it is sure to offer increasing opportunities in the future for genuine and practical service to business and to society.

# REPLACEMENT AND BOOK VALUE

HENRY RAND HATFIELD

WHEN the question arises as to the advisability of discarding an old, but still usable, machine, and substituting a newer model, one faces the necessity of writing off the book value of the obsolete machine. It is always disagreeable to write off an asset. It seems almost self-evident that if, by a narrow margin, it is desirable to discard an old machine with a book value of \$1,000, the scales would be tipped the other way if the book value were \$5,000. One might, in order to secure the more efficient machine, be willing to sacrifice \$1,000, but not to sacrifice \$5,000. This seems mere common sense, not a matter of accounting.

The problem has not generally been discussed in accounting texts, which, for the most part, deal with the accounting for the abandoned value: whether it should be charged to surplus, added to the cost of the new machine, or charged against current income. But while the expediency of substituting a new model machine is a problem of management, rather than of accounting, occasionally an accountant transcends the too narrow limits of his own field and discusses the factors which should be considered in deciding whether the change should be made. This is the case with two outstanding authors, both leaders in the ranks of academic accountants.

One of them, writing several years ago, stated, "Consideration must be given to the unexpired value (sic) of the old equipment. . . . substitution [must be] advantageous notwithstanding the loss of value of the unit to be superseded."

To avoid again being accused of never reading any recent literature, I quote a personal letter from the other outstanding accountant, written as recently as last August, which reads:

"I cannot seem to free my mind of the feeling that the decision as to when an old asset, with some service life remaining, should be scrapped and a new one installed must take cognizance of the loss suffered in the throwing away, as it were, of an item of property to which the book record attaches some unexpired cost."

Surely these statements mean that the substitution may be desirable if the "loss" is small, but not so if the unexpired cost is much greater.

The thesis here presented, of which criticism is sincerely requested, is that "the unexpired value of the old equipment" resembles, in an important respect, "the flowers that bloom in the spring."<sup>1</sup>

This may be illustrated as follows: A machine with an unamortized book value of \$5,000 (or any other sum) might have an anticipated life of 10 years with out-of-pocket operating expenses of \$2,000 per annum. A new machine, which also has an anticipated life of 10 years, can be bought for \$10,000, but because it is automatic and skilled hand labor is not necessary the out-of-pocket operating expenses are only \$500 per annum. The determination as to the desirability of making the substitution rests upon whether the total expense of the new machine, which includes depreciation (calculated in order to give effect to implied interest, on the annuity basis) plus the out-of-pocket expenses, is less or greater than the out-of-pocket expenses of the old machine. In this case it may be assumed that the depreciation of the new machine, on an annuity basis with interest calculated at 3 per cent, amounts to \$1,172—the total annual expense to \$1,672. The out-of-pocket expense if the old machine is retained is \$2,000. It is therefore desirable to make the substitution. In sup-

port of this thesis, it is to be noted that at the end of ten years the old machine will have been dropped, whether it was continued in use during that decade or not. The situation at the end of ten years in respect of the old machine is identical; in either case its former book value will have been entirely written off. But in other respects there is a marked difference. If the old machine is continued in use for the entire ten years, the out-of-pocket expenses will be \$20,000. If the new machine is substituted, the total expenses including both depreciation and out-of-pocket expense will be only \$16,720. Obviously it is desirable to make the substitution and save \$3,280. The same facts would hold if the old machine had a book value of \$20,000 or any other sum. Will not someone show me why it is incorrect to exclude consideration of the unamortized value of the old machine?

In the foregoing illustration the specific problem has been reduced to the simplest terms. The factor of difference in the number or quality of the units produced by the two machines is excluded, as well as differences in the junk value of the two machines. These would enter as modifying factors, but would not affect the question here discussed, namely: Does the amount of the book value of the old machine really need to be considered? Other nonessential factors are also eliminated. Among these are: the ability of the owner to provide funds for purchasing the new machine; the prophetic estimate that before long the price of the new machine will be substan-

tially lowered, or that still further improvements may be expected in the near future; the effect on income taxes, or on dividends on noncumulative stock; and a possible adverse influence on the credit of the corporation, if it shows a large write-off in respect of the abandoned asset. Many factors enter into the calculation. All that is here asserted is that the book value of the obsolete machine should not be one of them.

If any of the readers of the ACCOUNTING REVIEW are willing to reply to this statement, I beg that they will not, as most of my personal correspondents have done, wander afield to discuss how the loss (?) is to be recorded in the accounts. My thesis relates solely to the question whether the book value of the discarded asset affects the desirability of making the change, not to the accompanying bookkeeping entries.

It is distasteful, and somewhat mortifying, to admit that an engineer has seen more clearly than the eminent accountants quoted above. But this is surely true, as is shown by the following statement made by Paul T. Norton, Jr., "Any difference between the book value and the realizable value should not be used in any way when making a replacement study."<sup>1</sup>

Does this augur that members of the honored profession of engineering will in time grasp the accounting truism that a machine may have depreciated, although it operates presently with undiminished apparent efficiency?

<sup>1</sup> *Iron Age*, October 11, 1935, p. 13.

# PACIOLO OR PACIOLI?

RAYMOND DE ROOVER

IN THE July issue of the ACCOUNTING REVIEW, there appeared an article concerning "that very moot question of long standing—the correct spelling of Paciolo's name." The author, Professor Alfred V. Boursy, defends the position that the correct form is "Paciolo" and not "Pacioli." He bases his argument on (1) linguistic and philological reasons, and (2) the text of a tablet erected by the people of Paciolo's birthplace, Sansepolcro, a small town near Arezzo.

The author's philological and linguistic reasons are sound. It is not my intention to question them, but merely to make a few supplementary remarks. With regard to his other argument, however, it appears that the author's statements are open to question.

Professor Boursy takes the text of the tablet from an Italian work by Plinio Bariola.<sup>1</sup> This book is poorly done and contains numerous factual mistakes and errors in interpretation. It should never be cited as an authority. Bariola misquotes the text of the Sansepolcro tablet. A correct version is found in Dr. Balduin Pennedorf's German translation of the treatise on bookkeeping by Luca Paciolo.<sup>2</sup> I was able to check this version with a photograph of the Sansepolcro tablet which Professor Pennedorf kindly presented to me some years ago. From this evidence it clearly appears that the tablet is dedicated

to Luca Pacioli, and not to Luca Paciolo as stated by Bariola and repeated, on his authority, by Professor Boursy in the July issue of the ACCOUNTING REVIEW.

Incidentally Bariola's version of the inscription in Sansepolcro contains another glaring error. The tablet states that Paciolo invented (*inventò*) double-entry bookkeeping. This might not actually be the case, but nothing entitled Bariola to correct this misstatement by changing *inventò* ("invented") to *insegnò* ("taught"). A writer does not have the right to alter a text in order to suit his purpose.

With regard to the linguistic and philological arguments advanced by Professor Boursy, it is my opinion that they are not so decisive as he seems to think. Medieval people—as Professor Boursy himself points out—were notoriously careless and inconsistent in matters of spelling, especially in the spelling of family names. It is, therefore, extremely difficult, if not impossible, to formulate any hard and fast rules.

To take my own name as an example, it is spelled in old documents in at least five different ways: de Roover, de Rover, de Roever, de Roovere, and die Roovere. Sometimes two variant forms occur in the same document only a few lines apart, as in Luca Paciolo's testament. At the time of the French Revolution, an ignorant and "equalitarian" town clerk decided that the name should be written in one word "Deroover," because the *de* supposedly smacked of aristocracy.<sup>3</sup> This new spelling violated all linguistic rules and caused a great deal of trouble, because part of the family refused to accept the innovation and continued to spell the name in two words. In the case of Luca Paciolo, the

<sup>3</sup> In Flemish or Dutch *de* is the definite article "the" and not the preposition "of," as in French.

<sup>1</sup> *Storia della ragioneria italiana* (Milan, 1897), p. 374.

<sup>2</sup> *Luca Pacioli, Abhandlung über die Buchhaltung* (1494) (Stuttgart: C. E. Poeschel Verlag, 1933), p. 53. The text of the Sansepolcro tablet is as follows: "A Luca Pacioli—che ebbero amico e consultore—Leonardo da Vinci—e Leon Battista Alberti—che primo diè all'algebra—linguaggio e struttura di scienza—avviò il gran trovato—di applicarla alla geometria—inventò la scrittura doppia commerciale—dettò opere di matematica—base e norma invariata—alle postere lucubrazioni.—Il popolo di Sansepolcro—ad iniziativa—della sua società operaia.—vergognando 370 anni di oblio—al gran concittadino—poneva—1878."

right approach would be to investigate whether his nephew had any descendants and how the family, if it is not extinct, spells the name today.

Every one agrees that *Paciolus* is the correct Latin form. As for the Italian, *Paciolo* is evidently the translation of *Paciolus*, but a strong argument in favor of *Pacioli* is that this form is an abbreviation of *dei Pacioli* ("of the Paciolos"). Thus *dei Bardi* became *Bardi*; *dei Peruzzi*, *Peruzzi*; and *degli Alberti*, *Alberti*; but *dei Medici* was never shortened to *Medici*.<sup>4</sup>

<sup>4</sup> The Sansepolcro tablet mentions that Luca Paciolo was a friend of Leon Battista Alberti. During the Middle Ages, the members of this family called themselves "degli Alberti."

As this exception shows, there is no uniformity in the evolution of family names.

Since it is impossible to settle the question at issue from the available evidence, it should be permissible to use either "Paciolo" or "Pacioli." The forms "Paciuolo" and "Pacioli" are not wrong, but obsolete, because the *u* is commonly dropped in modern Italian.<sup>5</sup> As a matter of expediency, it might be desirable to reach an agreement among scholars and to avoid confusion by adopting a uniform spelling, *Paciolo* in preference to *Pacioli*.

<sup>5</sup> Apropos of pronunciation, the *i* in *Paciolo's* name is silent and is present only to give the *c* a palatal sound before the vowel *o*. The first *o*, which is accented, is an open *o* (Pah-châw-lo).

## THE NAME OF PACIOLI

R. EMMETT TAYLOR

IN A RECENT issue of the ACCOUNTING REVIEW,<sup>1</sup> there is an article entitled "The Name of Paciolo" which treats largely of my book *No Royal Road* and especially of the spelling of the name "Pacioli." I shall refer to this material hereinafter as the Article. It appears that the accounting material for the Article was furnished by one man who is an accountant, and that it was written by another man who is a linguist. It is impossible for me to determine which of the two men is responsible for what is to be found in the Article. I shall refer to these gentlemen, neither of whom I know, as the Authors.

I am led to believe from the tone of this Article and from some reviews of *No Royal Road* which have come to my attention (though I do not care to inject book reviews into this answer) that I have committed sacrilege or something in spelling the subject of my biography "Pacioli" rather than "Paciolo." Until I saw these

writings I had no intimation that there were at least two schools of thought and that a matter of this sort was so important. A week or so before the appearance of the Article, I had a very courteous letter from a gentleman in the accounting field with whom I have corresponded to some extent since the publication of *No Royal Road*, asking me whether I would mind stating why I used the spelling "Pacioli" rather than "Paciolo." I answered as well as I could, and in substance my reasons were these:

1. One of the many names which was used for Pacioli was Luca de Pacioli, which means "Luca of the Pacioli family." The "de" has been dropped in many Italian family names and the ending has not been changed.

2. The Catholic Encyclopedia uses this ending, and I have found it helpful to use this source especially in the case of Church people.

3. The Enciclopedia Italiana uses this

<sup>1</sup> July, 1943, pp. 205-209.

ending, and I have found it good practice to use this encyclopedia on Italian subjects.<sup>2</sup>

4. The Encyclopedia Britannica uses this ending, but personally for literary purposes I prefer the 11th edition and not the 14th, which the Authors cite and misspell.

5. Most of the authors whom I consider the leading authorities in their respective fields used the spelling "Pacioli."

The Authors in their Article make a number of statements which, in the interest of clearness and accuracy and intended merely as an answer, I should like to consider. While the Article relates mainly to my book, at no place that I see is the title given correctly. At the end of the first paragraph they write of my "splendid biography of Paciolo, *No Royal Road*." This biography is of "Pacioli," not "Paciolo." The title is omitted entirely where one has a right to expect it in Reference 3. The complete title to this book is *No Royal Road. Luca Pacioli and His Times*.<sup>3</sup>

I cannot believe that scholarship is to be advanced by listing the various spellings of the family name of Fra Luca if taken mainly from the titles in the published bibliography of *No Royal Road*. At the fifth writing of *No Royal Road* the material ran into two volumes. It was the consensus of the publishers and myself that it should be reduced by half for the purpose of publication. This was done in the sixth writing, and at that time the bibliography was also reduced—I should think to about one-third of its original size. A large num-

ber of the authors who are selected from my bibliography by the Authors are writing about Pacioli in the accounting field. I attempted to show in *No Royal Road* that Pacioli's accounting work was a very small part of his total work. The man is perhaps better known in the field of perspective and in the field of mathematics than he is in the field of accounting. He does not belong to the accountants alone; he belongs as much to the artists and to the mathematicians. The scholar will be surprised, I am sure, to learn how generally he is spoken of as "Pacioli" in other fields. But all of this would have been revealed if the Authors had consulted from my bibliography other than writers in the accounting field.

If to prove something the Authors desire this method of investigation, and to confine themselves to my published bibliography, I am willing to give it to them in this way: I have lately gone through the bibliography as found in *No Royal Road* and in all seriousness and sincerity have checked the names of those authors whom I believe to be leading authorities in the various fields and sought the spelling which they used.<sup>4</sup> I have used first the titles if the Friar's name is found in them, then the indices if there are any, and finally the text, without changes if the text is in other than English. I have omitted the word "Fra" where it is found, and the dates are given simply to acquaint the reader with the time when the author wrote. Naturally there can be differences of opinion about my classification of the authors, especially in the miscellaneous group. I get the following results.

#### Pacioli:

|   |             |
|---|-------------|
| Summa: Fratrís Luce de Burgo Sancti Sepulchri | 1494 & 1523 |
| Divina: Part I: Luca Pacioli                  | 1509        |

<sup>4</sup> I am sorry to have to omit Richard Brown's *A History of Accounting and Accountants*. I wrote for his publication again but the library from which I borrowed it did not send the copy. I have added two authors whose works I had in my original bibliography.

<sup>2</sup> I do not mean to imply that any encyclopedia is always right. I awaited with eagerness the volumes of the *Enciclopedia Italiana* as they were published to see what would be written about Pacioli. I received a jolt when I found that Pacioli was born in Borgo San Lorenzo. I immediately wrote to the author, Professor Agostini, to ask his authority for this assertion and he replied stating that it was a mistake which would be corrected in the errata. The correction was made.

<sup>3</sup> *No Royal Road. Luca Pacioli and His Times*, by R. Emmett Taylor (Chapel Hill: The University of North Carolina Press, 1942).

|   |             |
|---|-------------|
| Part II: Luca Paciolo                               | 1509        |
| Part III: Luca Pacioli; Lucas Pacioli; Luca Paciolo | 1509        |
| Euclid: Lucas Paciulus                              | 1509        |
| Will: Paccioli; Paccioli                            | 1511        |
| Encyclopedias:                                      |             |
| Britannica: Luca Pacioli                            |             |
| Catholic: Lucas Pacioli; (Paciolo)                  |             |
| Italian: Luca Pacioli                               |             |
| Biography:  |             |
| Agostini, A.—Luca Pacioli                           | 1924 & 1935 |
| Baldi, B.—Fra Luca dal Borgo S. Sepolcro            | (1533-1617) |
| Boncompagni, Da B.—Luca Pacioli                     | 1879        |
| Marini-Franceschi, E.—Luca Pacioli                  | 1914        |
| Pungileoni, L.—Pacciolo; Paccioli; Luca dal Borgo   | 1835        |
| Taylor, R. E.—Luca Pacioli                          | 1942        |
| Literature:   |             |
| Tiraboschi, G.—Paccioli; Pacioli                    | (1731-1794) |
| Zonta, G.—Luca Paciolo                              | 1928        |
| History:  |             |
| Burckhardt, J.—Pacciolo; Paccioli; Pacioli          | 1878        |
| Dennistoun, J.—Luca Pacioli                         | 1851        |
| Hazlitt, W. C.—Luca Paciolo                         | 1915        |
| Malaguzzi Valeri, F.—Luca Pacioli                   | (1915-1929) |
| Molmenti, P.—Luca Paciolo                           | 1908        |
| Renazzi, F.—Luca Paccioli da Borgo S. Sepolcro      | 1804        |
| Mathematics:  |             |
| Cajori, F.—Luca Pacioli                             | 1919        |
| Cantor, M.—Luca Paciolo; Pacioli                    | 1892        |
| Heath, T. L.—Luca Paciolo                           | 1908        |
| Libri, G.—Pacioli                                   | 1838        |
| Sedgwick, W. T. & Tyler, H.—Luca Pacioli            | 1939        |
| Smith, D. E.—Luca Pacioli                           | 1923        |
| Art:  |             |
| Crowe & Cavalcaselle.—Luca Pacioli                  | 1909        |
| MacCurdy, E.—Messer Luca                            | 1938        |
| Longhi, R.—Luca Pacioli                             | 1930        |
| Richter, J. P. & I. A.—Luca Pacioli                 | 1939        |
| Thausing, M.—Luca Pacioli                           | 1882        |
| Uzielli, G.—Luca Pacioli                            | 1884        |
| Vasari, G.—Fra Luca del Borgo                       | 1568        |
| Editors: Luca Pacioli                               | 1913        |
| Waters, W. G.—Luca Pacioli                          | 1901        |
| Accounting:   |             |
| Crivelli, P.—Luca Pacioli                           | 1924        |
| Geijsbeek, J. B.—Luca Pacioli                       | 1914        |
| Hatfield, H. R.—Paciolo                             | 1925        |
| Peragallo, E.—Paciolo                               | 1938        |

Miscellaneous:

|  |             |
|--|-------------|
| Gaye, G.—Luca Pacciolo; Luca dal Borgo         | 1836        |
| Harzen, E. von.—Luca Pacioli                   | 1855        |
| Jäger, E. L.—Lucas Paccioli                    | 1876        |
| Mancini, G.—Luca Pacioli                       | 1909        |
| Morison, S.—Luca de Pacioli                    | 1934        |
| Olschki, L.—Luca Pacioli                       | 1919        |
| Staigmüller, H.—Lucas Paciolo                  | 1889        |
| Winterberg, C.—Luca Pacioli                    | 1882        |
| Diarists:                                      |             |
| Graziani, The.—Pacioli                         | (1309-1491) |
| Fiction:                                       |             |
| Merejkowski, D.—Luca Paccioli                  | 1931        |
| Vallentin, A.—Luca Pacioli                     | 1938        |
| Religion:                                      |             |
| Wadding, J.—Lucas Paciulus e Burgo S. Sepulchi | (1731-1886) |

Contemporaries:

|   |  |
|---|--|
| Daniele Caetani: In Divina: Lucas Paciulus      |  |
| In Euclid: Lucas Paciulus                       |  |
| Franciscus Massarius: In Euclid: Lucas Paciulus |  |

The Authors seem to be primarily interested in the "i" or "o" ending for the Friar's name. From these data it will be seen that the "o" ending is used relatively few times. If I desired to use only one authority to follow on this matter, I should use the "Luca Pacioli" of Boncompagni, who possibly has done more by way of original documents about Fra Luca and the family than any other person.

The Authors write that "we must assume that Paciolo somehow knew his own name." On the contrary, it is quite likely that Pacioli may not have known his own name, or at any rate that he did not use it, and in this respect he would be a spirit kindred to modern times. To check this one should go through the procedure of getting several birth certificates. Catholics get their first and possibly a second name at baptism, and they sometimes add names at confirmation. I doubt very much whether Pacioli after he joined the Franciscans ever used a family name, except possibly in the Latin, for it is the practice

for a person to drop all of his former names when he joins a religious order. It is probable that, after he joined the Franciscans, Pacioli used the name which translates in part "Fra Luca of Borgo San Sepolcro." Since Pacioli was a deeply religious man, I can conceive of his personally using no name other than this one. I write "personally" because *No Royal Road* shows that, in certain instances at least, a name for him was supplied by others. It is true that I have seen in one place what is reputedly Pacioli's signature, but I doubted so much that he wrote it himself that I did not make a point of it.

The Authors admit in a very brief passage that "Pacioli" can be nominative plural; that many families when they dropped the "de" continued to use the name with the plural ending.<sup>6</sup> May I suggest that when the Authors get the ending of the name "Pacioli" settled in favor of "Paciolo" that they start on the names Garibaldi, Machiavelli, Cellini, Mazzini, or even Mussolini, and in fact on a large proportion of Italian names.

I am in no position to speak for Besta (their Reference 12 is to him and me), but I wonder how the Authors know this: "It is interesting to note that those scholars who bothered most with the name [Pacioli] not on the basis of linguistic analysis but on written evidence alone, came to the same conclusion." I have no recollection of expressing myself on this matter, certainly not to the Authors since I do not know them. To be accurate, I did subject this matter to linguistic analysis; I did not base my choice upon written evidence alone. I considered linguistic analysis, usage in the sense of Italian families deliberately adopting the "i" rather than the "o," and written evidence in the sense of

the spelling used by various authors. I concluded that the practice of dropping the "de" and retaining the "i" in Italian names was so general and that the spelling "Pacioli" was so universally used in his various fields of interest, that I would be justified in using it.

I infer that the Authors in their Reference 11 are relying upon Staigmüller as a source of Pacioli's will and not upon me. *No Royal Road* makes it clear that Boncompagni is my source for Pacioli's will. There is no spelling "Paciolus" (such as Staigmüller states and the Authors seem to follow) in Pacioli's will as I see it in front of me in the Latin. Twice the spelling used is "Pacciuoli"; once the spelling is "Paccioli." If Staigmüller used Boncompagni as a source, and he might have done so since the latter published the will in 1879 and the former wrote ten years later, he is obviously in error. Anyone who writes that this will contains the spelling "Paciolus" is translating from Latin to Latin, or more correctly he is changing the case ending of the name. It will be observed that when I translate the will, I write: "The tenor of the instrument is as follows," which means that it is not a word-for-word translation because I wanted sense (the will was taken down by a notary), but it is nearly a word-for-word translation and therefore I put it in quotation marks. Naturally when I translated it into English, I used the spelling of the name which I thought was best, and kept the spelling uniform. There are three instances in which the family name is used in the will; in no one of the cases is the word used to refer to Pacioli himself. In the first case it refers to his father; in the second case to his brother Piero; in the third case to his nephew Antonio Massi. In all cases it is clear that Pacioli was not using the family name to pertain to himself. Since Staigmüller apparently changes "Pacciuoli" and "Paccioli" to the Latin "Paciolus" and then to the Italian "Paci-

<sup>6</sup> I have heard several explanations why many Italians came to use "i" instead of "o" for the ending of their names, chief of which is that the "i" would indicate that they were of the nobility. For the development of the language see C. H. Grandgent's *From Latin to Italian*.

uolo," it seems strange that he did not change the Latin "Lucas" to the Italian "Luca" for the sake of consistency if for no other reason. If Staigmüller used Boncompagni as his source, he is incorrect when he writes that Baldi wrote: "Fu de la famiglia de' Pacioli." Baldi wrote: "Fu de la famiglia de Pacioli," which possibly means that as early as the time Baldi wrote (1533-1617) the "de" meaning "of the" had disappeared and that the "de" had become a part of the name. The next likely step in usage would be to drop the "de" altogether, and to continue to use the form "Pacioli," that is with the "i" ending.

In their Reference 12, the Authors refer to my quotation from Evelyn concerning Pacioli's controversy with Fratre Christofano where the writing in this connection is alleged to be in the Friar's own hand.<sup>6</sup> I have never seen the original of this document and I do not know where it may be found. I translated from the Italian of Evelyn and I am assuming that she took "Maestro Lucha Paciulo" from the original Latin. It is true that I state that the original is in Pacioli's handwriting, but I took Evelyn's word for this and admittedly that portion should have been in quotes. I felt justified in doing this because of her extensive writings and because of the standing of the publication for which she wrote.

In regard to Pacioli's petition to the Doge as mentioned in the Authors' Reference 15, I have the original before me and the name used in the text is "Master Luca de Pacioli"; but I for one do not maintain, as the Authors do, that Pacioli wrote this material and used that name. The data are from the general archives of Venice and, for all I know, they may have been taken down by a clerk or stenographer at the

time. I have examined dozens of these old Latin documents pertaining to Pacioli and I know of no case except the above in which he is referred to otherwise than as "Fra Luca de Borgo" or variations of those words.

The Authors are vexed and fret a bit because there is confusion in the spelling of Pacioli's name in the *Divina*. I thought that I made it sufficiently clear in my chapter on the *Divina* that after examining about six copies, I found for the first time, I believe, that they are all different. I felt that Pacioli wrote Part I and Part II but that he never had anything to do with Part III. The name used in Part I will translate "Luca Pacioli of Borgo San Sepolcro." The dedication to his students of Part II reads from my notes: "Fra Luca Paciulo." The dedication to Part III, which it seems me Pacioli did not do, has three different names in three different *Divinas*, namely: "Fra Luca Pacioli," "Lucas Pacioli," and "Luca Paciolo Burghense Minoritano." These last three spellings are given at three different places in *No Royal Road* purposely to emphasize that the *Divinas* are different. Nor do I want to hold too strictly that these spellings are correct. I should like to have the reader remember that I was never able to take any copies of the *Divina* out of libraries. For the *Divina*, I used three copies at the British Museum, one at the Ryerson Library in Chicago, one at the Newberry Library in Chicago, and did my translations from Winterberg's *Die Lehre vom Goldenen Schnitt*, which has both the Italian and German texts. I tried my best to compare the two *Divinas* in Chicago but was unable to make such arrangements. At different times I hired translators at the British Museum and in Chicago to translate for me and when I was unable to check back on them, I felt that the best I could do was to accept their translations. I point out in my book that three first-class Latinists could not agree about

<sup>6</sup> Evelyn was certainly a most elusive lady. I thought she was a man and looked for a first name, suspecting all along that it was a pseudonym. Like Pacioli, her name is given variously, and the form I used in the bibliography seemed to me the most likely.

Pacioli's will even though they were translating from the same text; the confusion lies not necessarily in the Latin but rather in the medieval abbreviations which must be changed before a translator can begin on the Latin.

The Authors seem intent to make quite a point in their Reference 21 that the plaque placed by the citizens in Borgo San Sepolcro reads: "A Luca Paciolo." The plaque I saw in Borgo says nothing of the sort. It says: "A Luca Pacioli." I do not mean to imply that in 1897 Bariola, to whom they refer, took down incorrectly the statement on the plaque. The town might be full of plaques which I did not see. Bariola wrote that in 1878 "an epigraph was placed on the house where he [Pacioli] was born." Perhaps so. The plaque I saw was on what is now a public building and is far too pretentious a building for Pacioli's humble birth. Bariola writes: "L'epigrafe suonava così:" which I translate: "The epigraph sounds thus:" What follows is not in quotes but it is in italics. In any case if Bariola is referring to the same plaque that I do, he has made several errors. I refer to my original notes upon a piece of hotel stationery on which I have the writing letter by letter as I wrote it down while I sat on the roof of a taxicab (with the usual audience), the better to see since the plaque is fairly high. From this perch the plaque was still twelve to fifteen feet away, as it is on the wall of the building within an arcade.

For the sake of the record I reproduce the writing on the plaque which I saw in Borgo San Sepolcro:

A Luca Pacioli  
Che ebbero amico e consultore  
Leonardo da Vinci  
E Leon Battista Alberti  
Che primo diè all' Algebra  
Linguaggio e struttura di Scienza  
Avviò il gran trovato  
Di applicarla alla Geometria

Inventò la scrittura doppia commerciale  
Dettò opere di matematica  
Base e norma invariata  
Alle postere lucubrazioni  
Il popolo di Sansepolcro  
Ad iniziativa  
Della sua società operaia  
Vergognando 370 anni di oblio  
Al gran concittadino  
Poneva  
1878

The best translation which I can work out for the plaque is this:

To Luca Pacioli  
Who was friend and counselor to  
Leonardo da Vinci  
and Leon Battista Alberti  
and who first gave to Algebra  
the voice and structure of a Science.  
He was the great founder  
of its application to Geometry

He invented the double entry system  
He wrote works on mathematics  
which became the foundation and  
unvaried form for future thinking

The people of San Sepolcro  
at the instance  
of their Workers' Society  
putting to shame 370 years of neglect  
to its great fellow citizen  
Erected  
1878

I had taken two pictures of the plaque. After the Article appeared, in order to check definitely on the plaque, I had these pictures enlarged, since a reading glass did not bring them out clearly enough. I find that my original transcription is correct and it is not exactly like Bariola's. For example Bariola uses the word "in-segnò," that is, Pacioli "taught the double entry system," and at the beginning of line 9 on the plaque the word "inventò" appears, that is, Pacioli "invented the double entry system." Bariola does not give: "Ad iniziativa della sua società operaia," that is "at the instance of their Workers' Society." The last word I have is "Poneva," and Bariola has "Pose."

Otherwise there is agreement enough between Bariola and me.

The Authors state that the fellow citizens of Borgo in 1878 "should know" the correct spelling when they put "Paciolo" on the plaque. Yet according to the plaque they "knew" that Pacioli invented the double entry system, which is not true. I found that some fellow citizens recently (not in 1878) did not even know that there was a plaque in town and I had to find it by walking about and gazing up at buildings.

Some time or other, and it may have been in 1878 since they were giving Pacioli's memory special attention that year, the citizens of Borgo San Sepolcro changed the name of the "Piazza San Francesco" near by to "Piazza Fra Luca Pacioli," spelling the name ending with an "i." I have also a picture of this name carved on a building in the Piazza and the spelling is very clear for those who care to see.<sup>7</sup>

Some years ago when I wondered whether there was any general interest in the man and in the name of "Pacioli," I prepared an article entitled "Pacioli" which was published in the ACCOUNTING REVIEW.<sup>8</sup> This was done for a number of reasons, chief of which was to serve notice, as one might do in respect to a doctor's thesis, that I was working in the field. In view of the fact that this article seems not to have been read by the Authors, for clearness of the record I must say here that I used the spelling "Pacioli." The article, intimating that a book might follow, covered in a most general way the material which may be found in *No Royal Road*. This article, although it contained possibly more than could then be found about Pacioli in one place, is not mentioned in the Article "The Name of Paciolo."

A portion of the Article "The Name of

<sup>7</sup> Pictures of the plaque and of Pacioli's name on the building in the Piazza have been submitted to the ACCOUNTING REVIEW.

<sup>8</sup> June, 1935, pp. 168-173.

Paciolo" which I find difficult to understand is to be found in its Reference 6 (page 209). Reference is made to Staigmüller's use of the name "Paciuolo" which in my bibliography is given as "Pacioli." Then in parenthesis the Authors write: "It seems that Professor Taylor either made a mistake or deliberately changed Staigmüller's spelling of "Paciuolo" to conform to his own preference. In a case of so much confusion, and in an otherwise splendid volume, this is a serious error or liberty. . . ." I can read what this says, but I do not understand it, if you know what I mean. The assertion disproves itself because if I had any preference for the use of the name I would have made it "Pacioli" and not "Pacioli." These Staigmüller articles (some of the earliest ones I used for *No Royal Road*) were in my possession during the year 1935, at which time I translated them from the German to the English. The material was on loan, and reference to my notes discloses that at the time I neglected to take down the title and other data, not knowing then that I might make further use of them. Later, rather than send for the material again, I took the name in the title from another source which unfortunately was incorrect. The error then arose in another direction, but in any case I am not excused from sending for the material again to obtain the correct spelling. The Authors do not dwell on the possibility that I made a "mistake," but immediately jump to the conclusion: "Evidence of such liberty-taking runs throughout the entire volume and makes any spelling taken from the volume, except from facsimiles, questionable and untrustworthy." In view of this conclusion, attention is called to their Reference 5 relating to page 189 of *No Royal Road*. The Authors quote from the facsimile on that page: "Fratr Lucas de Burgo Sancti Sepulchri Ordinis Minorum." The matter on that page is: "Fratris Luce

de Burgo Sancti Sepulchri: Ordinis Minorum. . . .” They have changed the case, of course, but it is not an exact quotation. It is unfortunate to change a facsimile in this fashion especially since Pacioli was frequently called “Fratris Luce.”

In conclusion, it is news to me that there was ever any question about the Latin. Those who care to use the Latin correctly write “Lucas Paciulus”; those who care to follow the singular in the Italian are per-

fectly correct in spelling the name “Paciolo”; those who prefer to follow usage and a practice which is very general in many fields, are correct in spelling the name “Pacioli.” It is wholly a matter of choosing to follow form or usage; but this is an old controversy which is never settled. My choice is “Pacioli”; but any other spelling that anyone cares to use will be all right with me.

## SOME POSTWAR PROBLEMS OF INDUSTRY

K. Y. SIDDALL

A FLOOD of postwar plans of every conceivable kind has deluged us in the past few months. Many of them are intelligent. Most of them contain valuable kernels of advice for all who read as they run. But few, if any, present practical frameworks on which the business man can build a program to meet his specific postwar problems. Many businessmen, in fact, are about ready to throw up their hands in despair and let nature take its course.

Here then is another postwar plan, but it is one that I believe most businessmen can adapt to their own problems.

First of all, let's make up our minds that although there are certain trends which affect the nation's whole future economy and all business, nevertheless, within those trends each business organization can to a great extent plot its own course. Business trends are not all inevitable; there is no certain destiny marked out for any person or group. You can meet your needs and the needs of the country if you anticipate them and plan for them.

In other words, one who has a head start in planning will have a tremendous advantage over one who improvises his ac-

tions hurriedly and without coördination when conditions force him to do so.

Probably the greatest problem—the one that will affect all businesses to a greater or lesser degree—is whether we shall find ourselves in a period of boom or depression immediately after the end of the war, or a year later, or two years later. Will the pent-up purchasing power be released in a torrent, or will the consumer's wartime habit of doing without persist? Will conversion to consumer goods be fast or slow? Will the labor market be choked by immediate demobilization of the armed forces and war workers, or will the transition be carried out slowly enough to keep unemployment at a minimum?

The Committee for Economic Development, an independent, non-profit organization of business men studying postwar problems, believes that the surest guarantee of painless transition from war to peace will be maintenance of full employment. If this can be accomplished, both production and purchasing power will be kept at a high level. It would mean providing 56,000,000 jobs and a gross national production of at least \$140,000,000,000.

With the government now buying al-

most half of our entire production, we shall need something to take the place of such expenditures. Certainly business wants the government to do its share in the postwar period; but I believe that businessmen in general are hoping that this share can be quickly reduced to a minimum for a permanent basis.

The executive and the legislative branches of the government must facilitate conversion. Their first job is to assure that business will have a favorable environment for the production of sufficient goods so that people in the United States can enjoy their accustomed standard of living at a reasonable cost.

Specifically, the government must expedite contract termination settlements so that business may have the cash to recon-vert to peacetime production; it must devise a workable plan for disposal of the surplus of goods that can be used by civilians; it should not use government-owned productive capacity for civilian goods unless it is needed to supplement or replace materials not otherwise obtainable or materials which may be produced more cheaply, all costs considered, for the common good; it must clarify its position on the patent laws and the employer's position under the labor laws; and it must see that whatever international currency system is adopted is fair to the United States, so that United States business can maintain its position in world trade.

The government has already shown a tendency in the direction of a favorable environment by such measures as:

1. The allowance of a five-year amortization on emergency facilities.
2. The ten per cent postwar refund of excess profits tax.
3. The two-year carry-back-and-forward on losses and on excess profits credits.
4. The three-year postwar plan to correct "life" inventory replacements.
5. The assurance of a governmental program of public works, if needed.

Now, how can the businessman go about postwar planning from his own standpoint? I have said that there is no such thing as an inevitable business trend; that the businessman, by an intelligent survey of future possibilities and of his own present condition, can anticipate many of his postwar needs.

Before we attempt to outline some answers, what specific questions must the businessman ask himself?

1. First, what is involved in converting my plant to peacetime production?
  - a. How long will conversion take?
  - b. How much will it cost?
  - c. Where is the money coming from?
  - d. What additions or improvements should be made in the plant?
2. What about my products?
  - a. Can my present products be adapted for the civilian market with little or no change in facilities?
  - b. Can new products be fitted into my general line?
  - c. Will new materials be available as a result of wartime acceleration of scientific progress?
3. What about personnel?
  - a. How many employees will be needed?
  - b. Can I absorb returning servicemen?
  - c. What will be the labor union situation?

The problems about postwar production, however, are only a small part of the question. I do not quarrel with the conclusion of the Committee for Economic Development that production, employment, and purchasing power must be kept up to the highest possible degree. I must point out, however, that increased purchasing power will not necessarily be followed by increased purchasing. How long, then, will industry produce goods which it cannot sell? Or, put it this way: Jobs create purchasing power, but it takes sales to make

jobs. Therefore, business must not only make the jobs, but must also translate purchasing power into effective demand.

This conclusion leads to the next question:

4. How shall I distribute my product?
  - a. Is my present distribution organization adequate?
  - b. What changes will there be in living habits after the war? What new demands will be created by these changes? Am I prepared, or can I prepare, to meet the new demands?
  - c. Will the channels of distribution change?
  - d. When and how shall I start rebuilding my sales organization?
  - e. What about advertising? What new media will be available? Will the present practices be satisfactory, or will new promotional ideas be needed?

None of these questions about production and distribution can be answered without an adequate knowledge of the market. It is clear that you cannot plan as to factory, inventory, or capital requirements without first estimating the volume of business you hope to sell. Effective demand will depend on two factors: the ability of the public to buy, and the willingness of the public to buy. People may have the money to buy but be unwilling or afraid to do so. Thus the next question for the businessman is a double-barrelled one, since it will have to consider both buying power and effective demand:

5. (A) What are the possible factors that may increase or decrease buying power?
  - a. Will inflationary prices result from abrupt removal of price controls?
  - b. Will my organization be adaptable to more efficient production methods, with consequent lowering of prices for my products?

- c. Will abrupt conversion bring great unemployment with consequent cutting of purchasing power?
- d. How much higher will personal income taxes go, and how long will they continue at peak rates?
- e. What new products that I cannot readily manufacture will make inroads into my market?
- f. Will accumulated savings in war bonds, insurance, etc., carry the market over the possible depression period?

(B) What are the possible factors that may increase or decrease demand, granted that the buying power is there?

- a. Will consumers replace war-time depletions immediately, or will they wait for new and improved products?
- b. Will the armed forces be demobilized for the most part, thus creating a considerable market, or will the greater part of them continue to be stationed overseas?
- c. Will changes in the age curve of the country's population increase or decrease demand for my products?
- d. Will foreign relief and increased Latin American and other foreign trade create new demands for my products?

These are given as samples of the type of questions every businessman must ask himself. To answer the questions intelligently, each one will require a thorough understanding of all the pertinent factors and conditions within his own sphere and outside of it.

I propose now to tell you how the individual businessman can find the answers to the questions as they affect him. He must first of all take a positive approach,

that is, he must try to build his plans as new conditions demand, rather than try to rebuild according to old ideas, however effective those ideas may have been in the past. He must view conditions and probabilities with an inquiring rather than an alarmed mind.

There are three large categories into which all study and planning will fall: production, financing, sales.

Let us take up those categories one by one, and decide what the individual businessman can and must do now to meet the challenges each will bring in the postwar period.

First, production. Here are the things you should do:

1. Wherever possible adapt new, streamlined production methods to your plant.
2. Discuss production problems with others in your field.
3. Study new materials and imports, with a view to finding whether they can improve the quality and cut the production costs of your products.
4. Try to develop new products and by-products.
5. Look into new patents in your industry.
6. Study the trade-school situation. See whether you can do something in the way of financial support or curriculum suggestions for the schools that train personnel for your industry.
7. Give your workers some incentive and encouragement to make suggestions for the improvement of production methods.
8. Examine the possibility of acquiring government-owned production facilities.
9. Make changes in your cost schedules according to new production methods, raw materials, and wage rates.
10. Plan for property improvement and replacement.
11. Estimate your share of postwar production.

Second, the matter of financing. You should:

1. Rebuild your working capital.
2. Prepare to expand operations and to develop new markets.
3. Build up reserves to take care of wartime depreciation and obsolescence.
4. Dispose of excessively large inventories of raw and partly-finished materials, if there is a possibility of a drastic drop in prices after the war, which would entail large losses.
5. Determine what volume you need in order to show a reasonable profit.
6. Provide reserves for losses due to returns, damaged stocks, etc.

The third of the large categories is sales. You have probably allowed consideration of this problem to slide, if the government has been your primary wartime customer, or if war conditions have disrupted your normal distribution set-up. It is not too early now by any means to make a thorough outline of your postwar sales organization. Among the things you should do now are:

1. Consider the advisability of discarding less profitable lines and concentrating on a few faster-selling products.
2. Study changes in consumer habits and tastes that will affect the sale of your products.
3. Investigate foreign markets.
4. Establish a workable credit system for your postwar dealer organization.
5. Study present and future shifts in population and income.
6. Consider the advisability of employing air freight transportation for your distribution needs.
7. Check up on the attitudes and wishes of dealers.
8. Consider the advisability of decentralizing distribution in conformity with the trend toward suburban residence.
9. Use advertising to keep your organization and products alive in the public mind.
10. Develop new promotional techniques.
11. Educate dealers on new sales pos-

sibilities for your products.

12. Direct your advertising at the new age and income groups.

13. Maintain good relations with dealers, government agencies, and consumers generally, and with organized groups in communities where you maintain plants and offices.

14. Consider the availability and value of new advertising media.

15. Determine proper sales quotas to be set up at various periods after the war.

16. Re-examine your trade marks, slogans, packaging, labels, etc.

17. Consider local vs. national advertising.

These are the questions you will have to answer for yourself and the plans you will have to work out. How can you go about it? Obviously, planning ahead, even on a small scale, is not an easy job. It requires knowledge and experience in many fields. It requires the full coöperation of all branches of your organization, plus outside help in all probability.

If your postwar plans are to be practical and workable, it is necessary immediately to get your key organizations busy at them. You will have to set up an over-all committee made up of representatives of every major branch of your business: product development, manufacturing, purchase, marketing, accounting, finance, research, personnel, traffic, legal, etc.

Each of these departments, in turn, should be encouraged to seek such outside supplementary counsel as is necessary—such as banks, management engineers, public relations counsel, advertising agencies, market researchers, auditors, credit associations, transportation experts, architects, union representatives, trade associations, retailers, tax experts, etc.

The progress of your planning should be watched over constantly and carefully. You can do this by requiring periodic reports from everyone in your organization who is concerned with it. To get their full coöperation you will have to educate those to whom you assign responsibility. Keep

emphasizing that without a thorough planning program the ability of your company to provide employment and advancement may be seriously threatened.

In all your planning, you will of course find that many factors cannot be foreseen clearly. Each day's news from the battlefronts abroad and from Washington will alter the postwar picture to some extent. Thus, your plans must necessarily be tentative. You should strive, however, to make them as complete, comprehensive, and workable as they can possibly be at any given time, but still adaptable to changes in conditions and outlook.

You can guide your planning somewhat by past experience, such as the period following the first World War and the situation immediately preceding mobilization for the present war. Make a thorough study of the conditions which affected your business in those periods, and get from it whatever useful knowledge you can. But do not depend on those experiences as an infallible, or even a good, yardstick. Be ready to scrap any or all of them when you find they cannot be applied to new conditions.

You can be further guided in your planning by taking full advantage of postwar studies now being made, but here too you must be cautious. Do not depend on any outside study as being completely applicable to your problems.

One more warning. Do not allow yourself to be overwhelmed by the magnitude and uncertainty of future problems. Work, study, and plan to adapt yourself to those conditions which are inevitable, or which offer little choice. At the same time map out a program for tackling first those conditions that you will be able to alter to suit your circumstances.

Above all, do not depend on your intuition or on muddling through. Your only real chance for absorbing the shocks of the transition from war to peace will rest in your being prepared for them. That preparation will be neither quick nor easy. But it will be worth while.

# THE ACCOUNTING EXCHANGE

A. C. LITTLETON

IT is not unusual for accounting teachers to stress knowledge as an important aspect of preparation for a career in professional accounting. And it is perhaps understandable that sometimes they may not show full appreciation of the existence of other factors besides technical competence. Are these limitations natural and necessary ones in the thinking of teachers? Are colleges presumed to confine their operations within the functions of handing on accumulated knowledge and testing students for retention? What other functions do they have in connection with accounting education?

Accounting practitioners, on the other hand, often emphasize the fact that qualities other than technical competence contribute greatly to successful professional service. Perhaps they sometimes give the impression that personal factors are more important than technical preparation. Is it a function of the organized profession, in the interest of improved professional morale and higher public esteem, to find ways of setting limits upon unprofessional qualities even when associated with technical competence?

It is not easy for each group to grasp the point of view of the other. Yet, it is important to the profession and to the public that this be done. For this reason, full discussion would be desirable about professional qualities, aptitude testing, and similar topics. The ACCOUNTING REVIEW will welcome considered opinions on various phases of these problems.

*Categories of Accountants.* There is need for agreement among accountants regarding the categories into which people of their designation should be classified. There is even greater need that the public generally be helped to distinguish different

categories of accountants by being told the qualifications, training, and duties appropriate to each subgroup of "accountants." Such agreement is highly desirable just now because the single word, in popular usage, is coming to embrace at once the ledger clerk who is close to the clerical details and the professional auditor who is a partner in an important firm that offers varied and expert accounting services to the public generally. There is some reason for believing that this confusion of thought extends to those who have worked out occupation rating scales for use in personnel testing, occupational counseling, etc.

If a large number of occupations were classified into, say six categories according to the "abstract intelligence" of the people concerned (that is, their ability to manage ideas and symbols), where would it be reasonable to expect to find "Certified Public Accountant (principal or partner of an important firm)," or "Controller (large corporation)"? Or one might ask, in which of six categories would we be likely to find "University Professor (Ph.D)," "Oculist," "Civil Engineer," "Journalist (feature writer)"? In one occupation rating scale constructed from data supplied by twenty industrial and vocational psychologists, the occupations last named above are classified in the first category of high abstract intelligence. But no mention is made there of the Certified Public Accountant or his counterpart in industry, the Controller.

It is not necessary to assert that a CPA is the intellectual equal of an oculist, a journalist, an engineer, or a professor, in order to point out that there may be a real question here concerning the adequacy of sampling which omits an important occupation. No doubt such ratings would be based upon measured differences in the

mental faculties found in persons who follow various occupations. But the omission of Certified Public Accountants and Controllers raises some questions: Were no CPA's tested? Were "accountants" conceived of as a single category without dispersions? Is high ranking in abstract intelligence associated only with persons who are college-trained?

There is another item of evidence which tends to show that accountants have failed to secure, outside their own ranks, full appreciation of the professional qualities found in the men who work in the higher reaches of their field.

For aptitude test purposes, occupations are sometimes rated according to the ability that must be present in the individual to understand and manage people and generally to act wisely in human relations. In one such rating scale, the top category includes bond salesmen and politicians because they influence people directly and face to face. The second category includes those who understand and control people, and those who inspire confidence in workers or clients. Here are mentioned factory manager, lawyer, physician, secretary.

Noting these facts, a considerable number of controllers, chief cost accountants, senior accountants (CPA), and partners in public accounting firms would no doubt wonder where that tired feeling at the end of the day really came from which they had thought originated in attempts to inspire members of their staff with confidence, and to understand the needs of superiors, clients, governmental agencies, and investors.

Professional accountants may already be depressed by the fact that they have not yet got over to the public generally the underlying distinction between "accountant (bookkeeper)" and "accountant (CPA or controller)." But they may become even more depressed at learning, from

this second occupational rating scale, that in social intelligence (this same ability to act wisely in human relations) "accountants and auditors" are ranked in the fifth category along with automobile mechanics, garbage collectors, blacksmiths, and telegraph operators. Few individuals in a category called "accountant (bookkeeper)" need to manage people or impress clients; and most of them would probably acknowledge that they had no desire to do so. But it is doubtful whether many persons in a category called "accountant (CPA)" would accept without protest the suggestion that they maintain their present status without the help of some faculty of social intelligence—that is, without some ability to act wisely in human relations. The CPA's briefcase is usually full of schedules covered with figures; but behind the figures he sees people, and motives, and actions. And the use he makes of the quietly gathered figures will influence people, and motives, and actions. To do these things, he could say, he must act of necessity with social intelligence.

Clearly, the qualities which make a professional accountant or controller what he is need to be listed and described.

*Traits Underlying Success.* If it is a fallacy to believe that successful professional service rests solely upon acquired knowledge and technical competency, is it also fallacious to believe that native intelligence and personality are the primary factors?

Bruce Bliven (*Men Who Make the Future*) tells of a study made by Dr. Catherine Cox Miles of the life history of three hundred famous people. She sought evidence of early signs of high intelligence and of quality traits that were common to the whole group. She found the following characteristics to be typical: physically active, mentally alert, cool-tempered, kind, modest, persistent, conscientious, trustworthy. Out of such ingredients, the

people in this sample of society had fashioned lives which later marked them as famous people.

Are these characteristics the signs of high intelligence? Probably not. But they do constitute some of the elements that make for success in any field of endeavor. Are these characteristics teachable? Accounting teachers would like to read some discussions of that question. Are these characteristics recognizable, measurable? Accounting practitioners would like to read some discussions of that question. They would like members of their staff to have qualities like these.

Bruce Bliven holds the view that the centers of intelligence probably are: strong powers of memory, strong powers of mental coordination, ability to summon these powers at will. To this might be added the faculty for holding many factors in mind at the same time. The American Chief of Staff, General George C. Marshall, seems to have that faculty to a remarkable degree. It was reported that once in meeting twenty-five reporters for an interview he asked each one to state a question he wished discussed. When all had replied, the General turned to each reporter in turn, and, repeating that man's question, proceeded to answer it in a manner which made all of his answers the parts of an integrated whole.

Can these powers be developed and this ability strengthened? Or is the individual held within the limits of his own inherited capacities in spite of all that school and experience can do? Can will power and perspiration weigh in the scales?

Elsewhere in this issue of the ACCOUNTING REVIEW, E. B. Wilcox points out that some important professional qualities are intangible and incommensurable, for example, ideals, honesty, and temperament. In his opinion the heart of professional aptitude may lie within attributes of physical capacity and personality. His thought-

ful analysis is encouraging. It indicates that some professional accountants, without being trained psychologists, are keenly aware that intangible factors are involved in serving the public satisfactorily.

The profession, on both the practice side and the teaching side, needs more of this sort of discussion. We should learn to measure whatever aptitudes and qualities we can: Those that cannot be measured should be subjected to other types of analysis. For example, public accountants of extended experience should have little difficulty in writing interestingly and usefully about such a topic as "Temperament for Professional Accounting." Certain characteristics of temperament are necessary and some others are desirable; some may be undesirable and others could be actually fatal to success in public accounting. What are they? Can not various characteristics of temperament be illustrated by examples constructed out of personal observations in practice? Would not such a discussion help individuals toward successful self-analysis and self-improvement?

Any other quality related to a professional career could with benefit be subjected to similar analysis and searching of experience.

*Qualities Classified.* Interest in naming the qualities that should be part of the equipment of the professional man in accounting is not new. Evidence of this fact can be seen in the bibliography referred to in a report by Professor Jeremiah Lockwood (*The Certified Public Accountant*, September, 1934) as chairman of the committee on education of the Philadelphia Chapter of the Pennsylvania Institute of Certified Public Accountants.

The report itself is a fine example of that interest. It includes a number of suggestions that are still pertinent. Professional men, the report says, should let the teachers know the qualities desired in staff men and should express opinions regarding

the kinds of education considered most beneficial. Professional men should develop methods of selecting junior assistants that would help to reduce a high turnover. And professional men should find ways of continuing organized, planned instruction for members of their staff.

It is regrettable that so little evidence is at hand to indicate substantial progress in a decade along the lines suggested. Perhaps there has not yet been enough reporting of prior experience and of current opinion. In the matter of professional qualities alone, we should know more than we do of the ideas of professional men in this connection. Those who have written on the subject in the past twenty years, and those who have expressed themselves recently, would be the last to think that the final word had been said on the matter.

If professional qualities were to be thoroughly analyzed, one of the first steps would be to classify the listed qualities as an approach to weighting the relative importance of the several items. In the hope that the attempt may stimulate further inquiry, some ideas regarding classifications are suggested here. This is followed by a concise summary of the various qualities mentioned by contributors to the periodical literature of accountancy in the past twenty years.

Most writers who take up the subject of professional qualifications attempt little or no classification of the characteristics they mention. Perhaps it would be appropriate now to go further and discuss qualities in groups of related elements. A four-class grouping is one possibility: conduct, personality, mentality, aptitude. Certainly a professional man would be expected to have qualities in all these groups. And undoubtedly there would be several qualities—desirable or undesirable—which would be closely enough allied to be considered together under the head, for example, of qualities related to conduct.

Another approach which might be of interest to many would analyze qualities into categories as they applied differently to junior assistants, semi-seniors, seniors, supervisors, managers, and junior partners. The qualities necessary to a good junior assistant would no doubt be expected also of men in higher ranks. But the reverse would not be true. Some qualities held essential to a senior accountant would not be expected to shine forth in a new junior. But those concerned should be alert to detect clues to future promise. Probably not every successful senior has the additional qualities necessary to make him an equally successful principal. But clues to those extra qualities should be sought.

It seems, therefore, that discussion would be helpful which undertook to find some distinctions between the qualities that characterize different staff ranks. Surely there are more differences than age and experience alone. Some degree of analogy exists with basis of rank in the armed services; qualifications for non-commissioned officer, junior officer, and general officer also involve many variations.

A study of qualities by categories could also be helpful because this might disclose those qualities which applied to all ranks equally, and those related to several ranks in varying degrees, or to one rank alone. It would tend to reveal those qualities which cast their shadows before and those which must be diligently sought out for recognition. Such studies might help to make it possible to balance superiority in some elements against deficiencies in others. Paragons of all virtues will be as hard to find in accountancy as in other fields. Finally the quality-elements should be studied in relation to the individual's fitness for current tasks and fitness for advancement. The elements should be classified as well as may be according to various ways of finding the evidence that reveals

or measures each one. And they could with benefit be analyzed according to the prospect that each might be improved in the individual by various types of experience and differing kinds of education.

*Qualities of Conduct.* Scattered through the literature of accountancy where the characteristics of a professional accountant are discussed is mention of numerous qualities that seem to be related through the fact that they touch the personal conduct of an individual in some way. Some of these are simple and obvious, such as good habits of speech and dress, well-groomed appearance; others are more complex, such as readiness at all times to maintain one's professional independence, ability to sense the full implication of the rules of professional ethics, willingness to set the example in all aspects of conduct. Between these types are numerous qualities briefly compacted into phrases like these: dependable and vigilant in duties; intellectually honest even in the face of a dilemma; unsusceptible to outside influence; possessed of ample moral stamina; inclined toward moderation in all things.

*Qualities of Personality.* The qualities which seem appropriate under this heading are numerous in the literature. Many of them are suggested by a word or two: tact, patience, poise, self-possession, persuasiveness, flexibility, due reticence, punctuality, courtesy, good humor, high spirits, friendly dignity, conversational reserve. Other items in the list use more words to express the essential idea: ability to get along with people, to get one's self liked, to hold fast to the right way without being dogmatic and assertive; capacity for securing respect for one's opinions, for impressing another with the values of professional services, for bringing about recognition of professional skill and judgment, for criticizing without giving offense.

*Qualities of Mentality.* The ideas that seem to fall into this category are variously

expressed. Here we find alertness, thoroughness, perseverance, concentration. Stress is often placed on imagination—reasonable, vivid, constructive, restrained imagination. Mention is made of a fund of common sense, of ready response to experience, of power to comprehend quickly and visualize clearly. Abilities of various sorts are included: to distinguish differences sharply, to see logical interactions, to draw careful inferences, to think clearly and correctly.

*Qualities Related to Aptitude.* Certain qualities desired in professional accountants seem more related to aptitude than to the other categories. But opinions may well differ greatly on this point. That is one of the reasons for wishing to learn more about the meaning of the word "aptitude."

Are the following characteristics proper ones to ascribe to an aptitude for accounting: pride in craftsmanship; ability to write clearly and concisely; capacity for presenting dry facts interestingly; speed and accuracy in arithmetic; facility and interest in the use of figures; facility in figure analysis and figure interpretation; enjoyment in untangling problem materials; analytical ability in dealing with one complication at a time out of many; analytical ability that is resourceful in the face of massed detail or inadequate data; ability to deal with analytical details without confusion or panic; good judgment in weighing evidence and interpreting facts; good judgment in the technique of using language and figures expressively; ability to use words within their real meaning, to separate near synonyms, to state the full truth tactfully; good selective judgment in the midst of many possible procedures; ability to choose wisely and well among a variety of acceptable ways; awareness of the interrelations and ramifications of business activities?

If someone has a faculty for seeing things from their negative side, it would

make an interesting presentation to summarize and classify the undesirable side of all of the qualities here listed and any others not included that come to mind. What aspects of conduct, mentality, etc., do we want to avoid in the profession of public accounting? Perhaps there is no end to undesirable qualities; but even so, a selection could be made that would give point, by contrast, to the desirable qualities.

*Counsels of Perfection.* We should all like to know that the incoming members of the profession came from the best homes and had the best natural abilities and the highest type of personality. We should be happy to learn that college graduates with the best general education, the highest scholastic standing, and the finest technical training were all trying to come into our field of work. So would business, government, and the other professions.

Wishing for the unattainable ideal might sometimes lead us toward a sort of inferiority complex: colleges of commerce may seem to get the students who are poorly prepared; graduates with the highest scholarship may seem to be going into other lines of endeavor than public accounting; people do not seem interested in developing schools that will specialize in training people specifically to enter the profession of public accounting.

If public accounting cannot have all of the best students, it can surely have a fair share of them—provided students who are good prospects are not frightened away by the long list of virtues and capacities desired.

It is clear that preparing persons for professional accounting is the joint responsibility of teachers and practitioners.

There is the duty of sifting those who have reached their highest level; and there is the duty of developing those who show further capacities. The colleges can do some of this, but they cannot do it all. Part of the sifting of professional qualities and technical competence must be done within active units of the profession. Both here and in the schools, the basis of the sifting should be definitely known and carefully fitted to the conditions. The colleges cannot be solely responsible for the complete development of those qualities that are teachable. They should do much of it; but a great deal of education must be supplied in one way or another after the individual leaves school and while he is in the midst of his daily work. Programs of staff training within the firm afford one approach; after-hours study provides another.

The profession is in need of more thinking and writing on these problems. The development of the individual should be an unending process up to the highest level he is capable of reaching. And that process should be planned and organized from beginning to end. It is true that one can learn to swim merely by jumping off a bridge; but there are better ways. And there is more involved in developing a profession than merely devising tests to exclude people from it. Neither teachers nor practitioners can effectively do the whole job either of sifting individuals who have reached their limit or of developing individuals who have extra capacity. But both groups could benefit from thoughtful analyses of the qualities desired of individuals and from constructive suggestions as to how this quality and that ability can be detected and fostered.

# PROFESSIONAL EXAMINATIONS

## A Department for Students of Accounting

HENRY T. CHAMBERLAIN

THE FOLLOWING problems were presented by the Board of Examiners of the American Institute of Accountants as the first half of the November, 1943 examination in accounting practice. The weights assigned were: problem 1, 18 points; problem 2, 12 points; problem 3, 20 points. The time allowed to solve all problems was four and a half hours. A suggested time schedule follows:

|           |            |
|-----------|------------|
| Problem 1 | 90 minutes |
| Problem 2 | 45 minutes |
| Problem 3 | 75 minutes |

### No. 1

From the following data prepare a consolidation of the balance-sheets of the Top Holding Company and its subsidiaries:

| Assets                       | BALANCE-SHEETS   |                 |                  |
|------------------------------|------------------|-----------------|------------------|
|                              | Top Holding Co.  | Subsidiaries    |                  |
|                              |                  | R Co.           | S Co.            |
| Current assets.....          | \$150,000        | \$30,000        | \$118,110        |
| Property, less reserves..... | 47,000           | 5,500           | 130,000          |
| Investment R Co. stock       |                  |                 |                  |
| 90%.....                     | 18,000           |                 | 2,500            |
| 10%.....                     |                  |                 |                  |
| Investment S Co. stock       |                  |                 |                  |
| 75%.....                     | 45,000           |                 |                  |
| 15%.....                     |                  | 9,000           |                  |
| Investment S Co. bonds       | 41,500           |                 |                  |
|                              | <u>\$301,500</u> | <u>\$44,500</u> | <u>\$250,610</u> |
| <i>Liabilities</i>           |                  |                 |                  |
| Current liabilities.....     | \$ 80,000        | \$23,000        | \$ 70,000        |
| Bonds payable.....           |                  |                 | 100,000          |
| Capital stock.....           | 200,000          | 30,000          | 50,000           |
| Surplus at acquisition.....  |                  | 1,500           | 5,000            |
| Earned surplus (deficit)     | 21,500           | (10,000)        | 25,610           |
|                              | <u>\$301,500</u> | <u>\$44,500</u> | <u>\$250,610</u> |

The investments in R Co. stock are carried at cost less subsequent net losses; the investments in S Co. stock at cost. The bonds were acquired at \$1,500 discount and are held for cancellation.

### No. 2

Prepare statements of principal and in-

come for the executor, covering the period from January 15 to January 31, 1943.

Alex Dunn, Jr., died on January 15, 1943; his records disclose the following estate:

|   |                  |
|---|------------------|
| Cash in bank.....   | \$ 3,750         |
| 6% note receivable, including \$50 accrued interest.....      | 5,050            |
| Stocks.....   | 50,000           |
| Dividends declared on stocks.....                             | 600              |
| 6% mortgage receivable, including \$100 accrued interest..... | 20,100           |
| Real estate—apartment house.....                              | 35,000           |
| Household effects.....  | 8,250            |
| Dividend receivable from Alex Dunn, Sr., trust fund.....      | 250,000          |
| Total.....  | <u>\$372,750</u> |

On July 1, 1925, the late Alex Dunn, Sr., created a trust fund, with his son, Alex Dunn, Jr., as life tenant, and his grandson as remainderman. The assets in the fund consist solely of the outstanding capital stock of Dunn, Inc., namely, 2,000 shares of \$100 each. At the creation of the trust, Dunn, Inc., book—as well as the market—value of the shares was \$400,000 and at December 31, 1942, was \$500,000. On January 2, 1943, Dunn, Inc., declared a 125% cash dividend payable February 2, 1943, to shareholders of record January 12, 1943.

The executor's transactions from January 15, to 31, 1943, were as follows:

|   |                    |
|---|--------------------|
| Cash receipts                             |                    |
| Jan. 20 Dividends.....                    | \$ 1,500.00        |
| 25 6% note receivable.....                | 5,000.00           |
| Interest accrued on note.....             | 58.33              |
| Stocks sold, inventoried at \$22,500..... | 20,000.00          |
| 6% mortgage sold.....                     | 20,100.00          |
| Interest accrued on mortgage.....         | 133.33             |
| 28 Sale of assets not inventoried.....    | 250.00             |
| 29 Real estate sold.....                  | 30,000.00          |
|   | <u>\$77,041.66</u> |

|                               |                    |
|-------------------------------|--------------------|
| Cash disbursements            |                    |
| Jan. 20 Funeral expenses..... | \$ 750.00          |
| 23 Decedent's debts.....      | 8,000.00           |
| 25 Decedent's bequests.....   | 10,000.00          |
| 31 Advances to widow.....     | 500.00             |
|                               | <u>\$19,250.00</u> |

## No. 3

Prepare the following statements:

- Cash settlement between partners.
- Taxable profit or deductible loss of partners.
- Tax basis to purchasers of assets bought December 31, 1942.

A and B, equal co-partners for many years entered into a dissolution agreement whereby, on December 31, 1942, the partnership assets, the cost of which are set forth in the following trial balance, were to

be distributed to the respective partners. The several assets were valued and identified by unit numbers, and each partner assumed any obligations pertaining to the units acquired by him.

Each partner received a distribution in cash of one-half of the amount paid by the other and a distribution in kind of one-half of the assets acquired by himself.

The assets acquired by each and the assigned values were as follows:

## Acquired by A:

|        |                 |
|--------|-----------------|
| Unit 1 | \$14,500        |
| Unit 3 | 700             |
| Unit 4 | 2,500           |
| Unit 7 | 3,200           |
|        | <u>\$20,900</u> |

## Acquired by B:

|        |                 |
|--------|-----------------|
| Unit 2 | \$13,000        |
| Unit 5 | 8,000           |
| Unit 6 | 6,200           |
| Unit 8 | 8,200           |
|        | <u>\$35,400</u> |

## TRIAL BALANCE

|   |          |                  |                  |
|---|----------|------------------|------------------|
| Accounts receivable                     | (Unit 1) | \$104,000        |                  |
| Notes receivable                        | (Unit 2) | 14,000           |                  |
| Mortgage receivable, including interest | (Unit 3) | 2,014            |                  |
| Grand Block                             | (Unit 4) | 6,000            |                  |
| Park Building                           | (Unit 5) | 14,000           |                  |
| Artesian Square Building                | (Unit 6) | 8,900            |                  |
| Millard Building                        | (Unit 7) | 5,700            |                  |
| Ponce Subdivision                       | (Unit 8) | 24,000           |                  |
| Reserve for uncollectible accounts      |          |                  | \$104,000        |
| Reserve for unearned discounts on notes |          |                  | 1,400            |
| Accrued taxes—Grand Block               |          |                  | 1,480            |
| Accrued taxes—Park Building             |          |                  | 3,200            |
| Accrued taxes—Artesian Square Building  |          |                  | 800              |
| Accrued taxes—Millard Building          |          |                  | 1,950            |
| Accrued taxes—Ponce Subdivision         |          |                  | 8,000            |
| Mortgage payable—Ponce Subdivision      |          |                  | 10,000           |
| Accrued interest (on mortgage)          |          |                  | 600              |
| A, Capital account                      |          |                  | 23,592           |
| B, Capital account                      |          |                  | 23,592           |
|   |          | <u>\$178,614</u> | <u>\$178,614</u> |

## Solution to Problem 1

The goodwill items included in Co. R's investment in Company S and in Company S's investment in Company R are computed as follows:

|  |                   |
|--|-------------------|
| Cost of investment in Co. S  | \$9,000.00        |
| Book value of investment at date of acquisition (15% of \$55,000.00) | 8,250.00          |
| Goodwill   | <u>\$ 750.00</u>  |
| Cost of investment in Co. R  | <u>\$3,500.00</u> |

|  |                  |
|--|------------------|
| Book value of investment at date of acquisition (10% of \$31,500.00) | 3,150.00         |
| Goodwill   | <u>\$ 350.00</u> |

## Computation of true book values of Companies R and S

Let:  $R$  = true book value of Company R  
 $S$  = true book value of Company S

- $R = 12500 + 750 + .15S$
- $S = 78110 + 350 + .1R$

$$M (1) \text{ by } .1 \quad .1R = 1325 + .015S$$

$$Tr. (2) \quad -.1R = 78460 - S$$

# Professional Examinations

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$$\text{Add (1) and (2)} \quad 0 = 79785 - .985S$$

$$S = \frac{79785}{.985} = \$81,000.00$$

$$\text{Sub in (1)} \quad R = 13250 + .15 (81000)$$

$$R = \$25,400.00.$$

|                            |             |                    |
|----------------------------|-------------|--------------------|
| <b>Proof</b>               |             |                    |
| Net worth of R.....        | \$25,400.00 |                    |
| Less interest of S (10%).. | 2,540.00    | \$22,860.00        |
| <hr/>                      |             |                    |
| Net worth of S.....        | \$81,000.00 |                    |
| Less interest of R (15%).. | 12,150.00   | 68,860.00          |
| <hr/>                      |             |                    |
| Total net assets.....      |             | <u>\$91,710.00</u> |

## TOP HOLDING COMPANY AND SUBSIDIARIES Consolidation of Balance Sheets

|                              | Date                  |                    |                     | Adjustments and Eliminations |                 | Consolidated<br>Balance Sheet |
|------------------------------|-----------------------|--------------------|---------------------|------------------------------|-----------------|-------------------------------|
|                              | Top<br>Holding<br>Co. | R Co.              | S Co.               | Dr.                          | Cr.             |                               |
| <b>Assets</b>                |                       |                    |                     |                              |                 |                               |
| Current assets.....          | \$150,000.00          | \$30,000.00        | \$118,110.00        |                              |                 | \$398,110.00                  |
| Property, less reserves..... | 47,000.00             | 5,500.00           | 130,000.00          |                              |                 | 182,500.00                    |
| Investment R Co. stock.....  |                       |                    |                     | (E) \$ 3,510.00              | (F) \$22,860.00 | *1,350.00 Cap. Surplus        |
| 90%.....                     | 18,000.00             |                    | 2,500.00            | (B) 390.00                   | (D) 2,540.00    | 350.00 G.                     |
| Investment S Co. stock.....  |                       |                    |                     | (G) 19,500.00                | (H) 60,750.00   | 3,750.00 G.                   |
| 75%.....                     | 45,000.00             |                    |                     | (A) 3,900.00                 | (C) 12,150.00   | 750.00 G.                     |
| 15%.....                     |                       | 9,000.00           |                     | (I) 1,500.00                 | (J) 43,000.00   |                               |
| Investment S Co. bonds.....  | 41,500.00             |                    |                     |                              |                 |                               |
|                              | <u>\$301,500.00</u>   | <u>\$44,500.00</u> | <u>\$250,610.00</u> |                              |                 | <u>\$484,110.00</u>           |
| <b>Liabilities</b>           |                       |                    |                     |                              |                 |                               |
| Current liabilities.....     | \$ 80,000.00          | \$23,000.00        | \$ 70,000.00        |                              |                 | \$173,000.00                  |
| Bonds payable.....           |                       |                    | 100,000.00          | (J) 43,000.00                |                 | 57,000.00                     |
| Capital stock:               |                       |                    |                     |                              |                 |                               |
| Top Holding Co.....          | 200,000.00            |                    |                     |                              |                 | 200,000.00                    |
| R Co.....                    |                       | 30,000.00          |                     | (F) 27,000.00                |                 |                               |
| S Co.....                    |                       |                    | 50,000.00           | (D) 3,000.00                 |                 |                               |
|                              |                       |                    |                     | (H) 37,500.00                |                 | 5,000.00 M.                   |
|                              |                       |                    |                     | (C) 7,500.00                 |                 |                               |
| Surplus:                     |                       |                    |                     |                              |                 |                               |
| Top Holding Co.....          | 21,500.00             |                    |                     |                              | (I) 1,500.00    |                               |
|                              |                       |                    |                     |                              | (G) 19,500.00   | 46,010.00 S.                  |
|                              |                       |                    |                     |                              | (E) 3,510.00    |                               |
| R Co.....                    |                       | *8,500.00          |                     |                              | (D) 460.00      |                               |
|                              |                       |                    |                     |                              | (A) 3,900.00    |                               |
| S Co.....                    |                       |                    | 30,610.00           | (H) 23,250.00                | (F) 4,140.00    |                               |
|                              |                       |                    |                     | (C) 4,650.00                 | (B) 390.00      | 3,100.00 M.                   |
|                              | <u>\$301,500.00</u>   | <u>\$44,500.00</u> | <u>\$250,610.00</u> |                              |                 | <u>\$484,110.00</u>           |

\* Red.

### Key to Adjustments

- (A) To take up 15% of the increase in S Co.'s net worth—  
15% (\$81,000.00 less \$55,000.00) = 3900.
- (B) To adjust S Co.'s investments in R Co. for the decrease in book value of R Co.:  
Share of net losses taken up in accounts..... \$1,000.00  
Share of decrease in book value since date of acquisition 10% (\$31,500.00 less \$25,400.00)..... 610.00  
Decrease in excess of S's share taken into accounts..... \$ 390.00
- (C) To eliminate 15% of the true book value of S Co.  
(D) To eliminate 10% of the true book value of R Co.  
(E) To adjust the Top Company's investment in R Co.  
Share of net losses taken up in accounts..... \$9,000.00  
Share of decrease in book value since date of acquisition 90% (\$31,500.00 less \$25,400.00)..... 5,490.00  
Decrease in excess of Top's share taken into accounts..... \$3,510.00
- (F) To eliminate 90% of the true book value of R Co.  
(G) To take up 75% of the increase in S Co. net worth since the date of acquisition  
75% (\$81,000.00 less \$55,000.00) \$19,500.00.  
(H) To eliminate 75% of the true book value of S Co.  
(I) To adjust investment in S Co. bonds.  
(J) To eliminate inter-company bond holdings.

## Solution to Problem 2

ESTATE OF ALEX DUNN, JR., \_\_\_\_\_, EXECUTOR

Statement as to Principal

January 15, 1943 to January 31, 1943

The executor charges himself with:

|  |                     |
|--|---------------------|
| Inventory of assets at the date of death, including a dividend receivable of \$250,000.00 from the Alex Dunn, Sr., trust fund. (See footnote and supporting schedule)..... | \$372,750.00        |
| Assets not inventoried.....  | 250.00              |
| Total charges.....   | <u>\$373,000.00</u> |

## The executor credits himself with:

|  |            |              |
|--|------------|--------------|
| Funeral expenses paid.....                               | \$         | 750.00       |
| Debts of decedent paid.....                              |            | 8,000.00     |
| Bequests paid.....                                       |            | 10,000.00    |
| Advances to widow.....                                   |            | 500.00       |
| Net loss on the sale of assets:                          |            |              |
| Loss on sale of real estate.....                         | \$5,000.00 |              |
| Loss on sale of stocks.....                              | 2,500.00   |              |
|  | \$7,500.00 |              |
| Less gain on sale of 6% mortgage.....                    | 100.00     | 7,400.00     |
| Total credits.....                                       |            | \$ 26,650.00 |
| Balance of assets on hand.....                           |            | \$346,350.00 |
| The balance of assets on hand is composed of:            |            |              |
| Cash.....  | \$         | 60,600.00    |
| Stocks.....  |            | 27,500.00    |
| Household effects.....                                   |            | 8,250.00     |
| Dividend receivable from Alex Dunn, Sr., trust fund..... |            | 250,000.00   |
|  |            | \$346,350.00 |

NOTE: The inventory of assets includes an extraordinary dividend receivable from the Alex Dunn, Sr., trust fund in the amount of \$250,000.00. The testator was the life tenant of the Alex Dunn, Sr., trust fund and the executor should obtain legal opinion or a ruling from the court as to the propriety of including the full amount of this dividend receivable in the corpus of the estate. At the creation of the Alex Dunn, Sr., trust fund the book value and market value of the stock of Dunn, Inc. was \$400,000.00 and this dividend will reduce the book value to \$250,000.00.

## ESTATE OF ALEX DUNN, JR., \_\_\_\_\_, EXECUTOR

Inventory of Assets  
January 15, 1943

|  |    |              |
|--|----|--------------|
| Cash in bank.....  | \$ | 3,750.00     |
| 6% note receivable, including \$50.00 accrued interest.....      |    | 5,050.00     |
| Stocks.....  |    | 50,000.00    |
| Dividends declared on stocks.....                                |    | 600.00       |
| 6% mortgage receivable, including \$100.00 accrued interest..... |    | 20,100.00    |
| Real estate—apartment house.....                                 |    | 35,000.00    |
| Household effects.....   |    | 8,250.00     |
| Dividend receivable from Alex Dunn, Sr., trust fund.....         |    | 250,000.00   |
|  |    | \$372,750.00 |

## ESTATE OF ALEX DUNN, JR., \_\_\_\_\_, EXECUTOR

Statement as to Income  
January 15, 1943 to January 31, 1943

|   |  |          |
|---|--|----------|
| The executor charges himself with:                      |  |          |
| Dividends collected.....                                |  | \$900.00 |
| Interest on 6% note.....                                |  | 8.33     |
| Interest on mortgage.....                               |  | 33.33    |
| Balance of undistributed income consisting of cash..... |  | \$941.66 |

## Solution to Problem 3

## A AND B

Statement Showing Settlement on Dissolution  
December 31, 1942(a)  
Property received by A

|                                    |          |             |
|------------------------------------|----------|-------------|
| Accounts receivable valued at..... |          | \$14,500.00 |
| Mortgage receivable valued at..... |          | 700.00      |
| Grand total.....                   | \$       | 2,500.00    |
| Less accrued taxes.....            |          | 1,480.00    |
|                                    |          | 1,020.00    |
| Millard Building.....              | \$       | 3,200.00    |
| Less accrued taxes.....            | 1,950.00 | 1,250.00    |

|  |             |                    |
|--|-------------|--------------------|
| Total.....                             | \$17,470.00 |                    |
| Cash due A from B 50% of \$12,800..... | 6,400.00    | \$23,870.00        |
| Cash due B from A 50% of \$17,470..... |             | 8,735.00           |
| Net assets received by A.....          |             | <u>\$15,135.00</u> |

*Property received by B*

|   |             |                    |
|---|-------------|--------------------|
| Notes receivable valued at.....           |             | \$13,000.00        |
| Park Building.....                        | \$ 8,000.00 |                    |
| Less accrued taxes.....                   | 3,200.00    | 4,800.00           |
| Artesian Square Building.....             | \$ 6,200.00 |                    |
| Less accrued taxes.....                   | 800.00      | 5,400.00           |
| Ponce Subdivision.....                    | \$ 8,200.00 |                    |
| Less: Mortgage payable.....               | \$10,000.00 |                    |
| Accrued interest.....                     | 600.00      |                    |
| Accrued taxes.....                        | 8,000.00    | 18,600.00          |
|   |             | *10,400.00         |
| Total.....                                |             | \$12,800.00        |
| Cash due B from A 50% of \$17,470.00..... |             | 8,735.00           |
| Cash due A from B 50% of \$12,800.00..... |             | 6,400.00           |
| Net assets received by B.....             |             | <u>\$15,135.00</u> |

\* Red.

(b) There is neither taxable profit nor deductible loss for either partner.

## (c) COMPUTATION OF TAX BASIS

|  |  |                    |
|--|--|--------------------|
| Basis of A per problem.....                    |  | \$23,592.00        |
| Additional cash paid in at 12/31/42 (net)..... |  | 2,335.00           |
| Total.....                                     |  | \$25,927.00        |
| Add: Liabilities assumed.....                  |  | 3,430.00           |
| Tax basis of assets.....                       |  | <u>\$29,357.00</u> |

Allocation in ratio of 140.464% of valuation:

|                          | Valuations         | Basis              |
|--------------------------|--------------------|--------------------|
| Accounts receivable..... | \$14,500.00        | \$20,367.26        |
| Mortgage.....            | 700.00             | 983.30             |
| Grand Block.....         | 2,500.00           | 3,511.60           |
| Millard Building.....    | 3,200.00           | 4,494.84           |
|                          | <u>\$20,900.00</u> | <u>\$29,357.00</u> |

|                                      |             |
|--------------------------------------|-------------|
| Basis of B per problem.....          | \$23,592.00 |
| Cash received at 12/31/42 (net)..... | 2,335.00    |

|                              |                    |
|------------------------------|--------------------|
| Total.....                   | \$21,257.00        |
| Add liabilities assumed..... | 22,600.00          |
| Tax basis of assets.....     | <u>\$43,857.00</u> |

Allocation in ratio of 123.8898% of valuations:

|                               | Valuations         | Basis              |
|-------------------------------|--------------------|--------------------|
| Notes receivable.....         | \$13,000.00        | \$16,105.70        |
| Park Building.....            | 8,000.00           | 9,911.19           |
| Artesian Square Building..... | 6,200.00           | 7,681.13           |
| Ponce Subdivision.....        | 8,200.00           | 10,158.98          |
|                               | <u>\$35,400.00</u> | <u>\$43,857.00</u> |

## COMMENT

The solution to Problem 3 given above is only one of several possible interpretations of this problem. The values assigned to the various units were assumed to be the gross values (i.e., without consideration of obligations assumed). If the values given are assumed to be "net" an entirely different result will be obtained. The statement of the problem is so deficient that one can only guess at the author's intention.

# BOOK REVIEWS

SIDNEY G. WINTER

*How Corporations Conceal Profits and How to Understand Your Corporation's Financial Report.* Prepared by United Electrical, Radio & Machine Workers of America. (New York: Privately printed, 1943. Pp. 95.)

As stated in the Foreword, this booklet was published by the United Electrical, Radio and Machine Workers of America for two reasons. "The first is to debunk the notion held by many of our members that when their employers report that they made only so much profits, the reports, because expressed in dollars and cents, represent exact calculations and are therefore true. The second is to put into the hands of our organizers, business agents, and other active members facts that will help them to understand the complex figures with which they sometimes are confronted." In addition to abbreviated treatments of a variety of accounting matters, the booklet embraces such non-accounting topics as the advantages of unions, inflation, the proxy system, and tax policy (e.g., "when the full impact of the new 'soak the poor' income tax is felt, the idea that corporation profits are sacred will have to be challenged"). (p. 7)

The Introduction demonstrates the practical value of taking into consideration accounting information when demanding that employees should receive increased wages, but cautions against "an all-too-general tendency to take these reports at their face value." (p. 7) It is felt that, in some instances, this tendency has created the notion among workers that their employers would go broke if they had to pay higher wages. "Many companies have been surprisingly successful in spreading such ideas among their employees. Some have commenced printing special simplified versions of their financial reports for their employees for the purpose of misleading them." (p. 8)

According to U. E., it is a safe bet that accounting statements represent, to a considerable degree, what the corporation chooses to have the public know about itself, and therefore "financial reports are as important for what they conceal as for what they reveal." (p. 16)

More specifically, the principal means of concealment of profits, as suggested by U. E., are:

(1) High salaries (including the huge fees paid to law firms and accountants).

(2) Interest on bank loans and on bonded debt. ("In companies which have no need for additional funds, it sometimes happens that the managements will borrow money for their companies from themselves, or from others who share in the control of the company. Thus additional company income is diverted into their pockets under the pretext that it is a necessary expense.") (p. 38)

(3) Special reserves. ("To some extent these reserves have as their purpose concealing profits by taking huge deductions from income. Corporations which run out of excuses for setting up reserves may set up what they call a 'reserve for contingencies'.") (p. 30)

(4) Government financed plant expansions. ("... the new plants which many corporations are having built for them by the government represent, to all intents and purposes, additional profits. Under the five-year amortization plan, corporations are permitted to add enough to the contract price of products sold to the government to pay for these plants over a period of five years.") (p. 37)

(5) Last-in, first-out inventory accounting.

(6) Excessive tax reserves.

(7) Excess depreciation.

(8) Expensing of items properly capitalizable.

The union lists others.

The booklet makes some observations which might well be taken as fair and sound challenges to accountants. The following quotation is the best example of this. "Without engaging in any illegal practices, corporations can and do make their net assets and profits appear to be greater or less than they would be under an equally acceptable method of accounting." (p. 17) The underlying influence of human judgments on financial statements is given due emphasis—with the added union twist that "Today under the influence of higher tax rates, these judgments are being stretched for all they are worth." (p. 27) And the union is "independent" enough to warn that "It would be a mistake to imagine that the accountants who certify the corporations' accounts check the accuracy of the corporations' records, or question the judgments of the officers very closely. On the contrary, they are considered to have discharged their duty if they have satisfied themselves that recognized accounting procedures were used in preparing the reports." (p. 43)

Examples of accounting statements are presented and are given a sample analytical treatment and interpretation. The booklet's usefulness is enhanced by a rather complete glossary of financial terms. Other supplementary information includes a listing of salaries of corporation officers, statistics on corporation profits, and tabulations of statement ratios. Throughout the text there are suggestions relating to the ways in which accounting statements can be used to the advantage of unions. The booklet is necessarily prejudiced and superficial, but in general its objectives have been fulfilled. There seems to be no question but that such a publication makes good sense in that unions and their members will more adequately attain their goals if corporation finance and accounting statements are more widely understood.

HERBERT E. MILLER

University of Minnesota

*Managerial Control Through Internal Auditing.* Victor Z. Brink. (Chicago: La Salle Extension University, 1943, Pp. 55.)

Internal auditing is a phase of accounting and management control that has increased greatly in impor-

tance during the past few years,—occasioned primarily, it seems, by the wholesale conversions to war production and the resultant problems arising out of financial relations with the various agencies of the federal government. Many companies have enlarged previously established auditing departments; others have created new departments where none existed; still others, such as a large local manufacturer of aircraft engines, have found it necessary to engage the services of public accounting firms to assume the job of internal auditing, at least until a permanent internal auditing staff could be set up.

The pamphlet, "Managerial Control Through Internal Auditing," prepared by Victor Z. Brink, the Research Director of the Institute of Internal Auditors, is a brief but enthusiastic exposé of the activities and potentials of the internal auditors as a group and the value of their services to corporate management.

There are six chapters in the pamphlet. The first is designated, "The General Nature of Internal Auditing." In it the author builds up to the following definition of internal auditing: "The organized activity on the part of management to assure itself of proper adherence to company procedures and policies (operating as well as accounting), and to secure the benefits of a systematic and objective verification and constructive analysis and appraisal of the accounting, financial, and other aspects of the company's operations." This same definition is acceptably quoted by John B. Thurston, first past president of the Institute of Internal Auditors, in a recent article in the *Journal of Accountancy*.<sup>1</sup> It will be observed that the definition is sufficiently broad to encompass virtually every aspect of accounting and management functions.

The second chapter is entitled, "Major Types of Internal Auditing Activities." Eight of these are set forth and elaborated on. They follow:

- (1) Verification of financial and operating data.
- (2) Analysis.
- (3) Compliance.
- (4) Protecting company assets.
- (5) Fraud and error.
- (6) Appraisal.
- (7) Training company personnel.
- (8) Miscellaneous (clearinghouse for new ideas, assisting the public accountant, direct services to management on special projects).

Chapter three is headed, "The Internal Auditing Program." In it the author sets out two underlying concepts of internal auditing:

- (1) The confirmation of the accuracy of recorded data.
- (2) The constructive appraisal of accounting and operating procedures.

The first concept is mentioned only; the second is elaborated in detail by the setting forth of the basic procedural principles in the handling of cash, receivables, inventories, fixed assets, various liabilities, and so forth. These are the common principles generally advocated for a good system of internal control.

Chapter four is devoted to audit records and reports. A few general principles, similar to those set forth for the audit working papers and reports used by public accountants, are discussed.

In chapter five, the place of the internal auditing department in the company organization is taken up. It is decided that, for the sake of his independence, the internal auditor should preferably be responsible to the president, rather than to the treasurer or chief accounting officer.

Chapter six completes the pamphlet with a discussion of the coordination of internal auditing and the work of the public accountant. It is concluded in a general way that there is no conflict between the work of the two, but rather that the work of the one supplements that of the other.

It is the reviewer's feeling that in certain respects the pamphlet is slightly overdone in glorifying the work of the internal auditor and in selling his efforts as the "... means by which management can cope with the new and difficult problems which are a part of the modern corporate operations..." When the author, under the heading of Appraisal, states, "For example, he can, by appropriate cost analysis, determine the effect on product costs of various types of wages payments over a reasonable period of time," it will appear to some that such activity may, to be generous, be on the outer fringe of the more or less recognized duties of the internal auditor.

It would seem that a perusal of the pamphlet might be stimulating to the ambition of the accounting student and to the ego of the presently engaged internal auditor, for they are promised, "It is a field with vast potentialities and it is commanding and will continue to command the interest of qualified men who possess training in both accountancy and the broad phases of business management. It is not too much to say that the internal auditor of today can well be the management leader of tomorrow." It seems doubtful that the accounting teacher or practitioner will consider it a substantial contribution to existing literature.

C. F. CHIZEK

*University of Notre Dame*

*The Elements of Statistics.* Elmer B. Mode. (New York: Prentice-Hall, Inc., 1941. Pp. 368. \$3.50.)

One of the first questions that occurs to a reviewer after reading a textbook upon any subject is "Does the title of the book appropriately indicate its contents?" The answer is an easy affirmative for anyone reviewing Mode's "Elements of Statistics." A title of this sort implies that the author set out to write an elementary text and in this he has succeeded. The book "presupposes no mathematics beyond the usual secondary-school geometry and algebra." The book is intended as an introductory text which may be used wherever there is need of a sufficient training in the subject to enable the student to "read intelligently and somewhat critically the statistical content of the literature" in such varied fields as business, economics, sociology, biology, psychology, education, and others. In short, the book is intended more for those who expect to be consumers,

<sup>1</sup> Internal Auditing and the Public Accountant," by John B. Thurston, *Journal of Accountancy*, September, 1943, p. 220.

as it were, of statistics than for those who desire to become technicians practicing the use of the methods in some particular field.

In the reviewer's opinion the value of this text for instruction in the elements of the subject is definitely enhanced by the fact that the author favors no particular field of interest. By drawing his illustrations and problem material from a great variety of fields he is able to create in the mind of the student an appreciation of the universal character of the statistical tools. No more powerful incentive for the study of statistics can either author or teacher awaken than that which springs from the student's realization that through statistics he is being introduced to methods that embrace life at so many points cutting across practically all of the sciences and even some of the arts.

The fourteen chapters and their contents have been arranged in a logical pattern. After the usual introduction the author takes up matters of computation (Chapter II) and charts, diagrams, and graphs (Chapter III). Then follow three chapters devoted to the construction of frequency distributions and measures of central tendency. Chapter VII deals with index numbers as one important application of measures of central tendency. Chapters VIII, IX, and X treat various other aspects of frequency distributions, such as measures of dispersion, skewness and kurtosis, as well as the fitting of the normal curve of error. The next chapter treats of curve fitting as applied to paired values of which the time series is regarded as a special case. Correlation is the subject of Chapter XII, leaving probability and measures of reliability as the topics of discussion for the last two chapters of the book. On no topic which the author takes up for discussion does he linger long, yet his treatment is far from superficial.

A number of specific points concerning the contents of the book need to be mentioned. Some of these are favorable and others are not, but no attempt is made here to evaluate in any summary fashion since "favorable" and "unfavorable" are relative terms at best. One of the desirable features of the book is the discussion on computation which is the subject of Chapter II. Here the author very wisely makes a distinction between precision and accuracy. Both the time graphs and the problem material of Chapter III could have been brought more nearly up to date. The data of a time series tend to become ancient history soon enough when put in printers' ink, even when the information is the most recent that could be obtained at the time of publication. A minor inconsistency crops up in Chapter IV in the author's treatment of the frequency distribution charts. On pages 66, 68, and 71 a break of the horizontal scale is indicated yet in representing similar data on pages 72 and 73 the break is omitted.

The discussion of the types of averages, their characteristics and uses, is unusually complete. However, the practice followed by mathematics textbook writers, and observed by the author, of giving theorems followed by proofs is not well suited to a textbook in statistics. The proofs should not intrude upon the text material but should be relegated to a mathematical appendix where the students who might desire them could find them. The use of the arithmetic mean in preference to the

median as the value from which to measure deviations in computing the mean deviation appears to be a departure from a fairly standard practice and the reason given by the author for the departure is far from convincing.

The material of Chapter IV on moments could have been deleted without any loss in value of the book as an elementary text. The treatment of the frequency curve in Chapter X is likely to give the student who has never had calculus an unnecessary fright. Since the author presupposes "no mathematics beyond the usual secondary-school geometry and algebra" it would seem that his introduction of the symbols from integral and differential calculus is definitely out of place.

Another example of the author's tendency to provide fairly simple concepts with a needlessly forbidding mathematical attire is afforded by his use of Greek letters in place of the familiar Arabic notation in the chapter on curve fitting.

In general this text is likely to find its best market among those colleges and universities that offer a one-semester course in statistics under the auspices of the mathematics faculty. The author's omission of any discussion of either sources of data or methods of their collection may or may not be regarded as a defect since it is a moot question whether a knowledge of sources and means of assembling data can be successfully taught. The importance of this knowledge, however, in carrying on the great bulk of daily activities in which statistics play a part is beyond any shadow of a doubt.

R. PARKER EASTWOOD

Columbia University

*Foreign Trade—Principles and Practices* (Revised Edition). Grover C. Huebner and Roland L. Kramer. (New York: D. Appleton-Century Company, Inc., 1942. Pp. xiii, 554.)

This revision of an original edition published in 1930 is designed to present a discussion of "the entire general field of foreign trade." An attempt has been made to take account of the many changes that have taken place in the field since 1930 by the inclusion of chapters dealing with trade agreements, tariff and non-tariff controls, exchange control, and various wartime practices affecting international trade.

Although the authors consider "both the theoretical and practical aspects of international commerce," the emphasis throughout the text is definitely upon the practical approach. The discussions of theoretical aspects of foreign trade give the student only a bird's-eye view of the basic theoretical issues involved in international economic relations.

The authors state clearly in the preface their emphasis upon principles and practices prevailing in foreign trade prior to World War II. As a result, some of the major problems facing any system of international exchange in the postwar world receive slight treatment. No student of international affairs would expect a blueprint treatment of future commercial policies and practices, but even the training of "practical foreign traders" would seem to call for more discussion of such problems as they relate to the development of a world economy. After all, world economic development and peace is the environment in which foreign trade can best serve a use-

ful purpose, and attention to major problems of efficient utilization of resources from the world point of view is extremely important.

Courses in foreign trade as they are taught in American universities and colleges exhibit very little uniformity. In some cases the subject is approached as a special aspect of training in economics while in others the purpose is to acquaint the student with the techniques and practices operative in the actual conduct of foreign trade. This text serves the needs of a course in which the practical aspects of foreign trade are emphasized.

PAUL R. OLSON

University of Iowa

*Inter-American Affairs, 1942.* Edited by Arthur P. Whitaker. (New York: Columbia University Press, 1943. Pp. x, 252. \$3.00.)

This book is the second of a series to be published annually under the above title. The opening and closing chapters are written by the editor; others are contributed by authorities equally well qualified in their fields. Although new contributors have been added, the organization and content of the material follow the same general pattern as the earlier volume. The book contains the following chapters:

Politics and Diplomacy

1. The Inter-American System, by Arthur P. Whitaker
2. Canada, by John P. Humphrey
- Industry, Commerce, and Finance
  1. The United States and Latin America, by George Wythe
  2. Canadian Economic Developments, by Constant Southworth

Cultural Relations, by William Rex Crawford

Social Welfare in Latin America, by Katharine F. Lenroot

Labor Legislation in Latin America, by Eugene D. Owen

The Inter-American Health and Sanitation Programs: Activities of the Office of the Coordinator of Inter-American Affairs, 1942, by George C. Dunham

Inter-American Technical Cooperation, by Kenneth Holland

Summary and Prospect, by Arthur P. Whitaker

There is a surprising amount and variety of information assembled under each section; the work is encyclopedic, presenting in a clear, able, and concise manner the major happenings in the Americas during 1942. Not only are the major social, political, and economic events carefully chronicled and described, but the work is interpretive and analytical, considering the crisp manner of treatment. The 1941 volume was favorably received, and that for 1942 will assume a place of equal merit. As a yearbook its value will be enhanced with successive editions, each volume serving both to supplement and to complement the others. Anyone working in the field of Latin America will find here many informative leads and suggestions. The book is not limited to Latin American affairs, however; it is gratifying to find a

work such as this which includes an appraisal of the rôle of Canada in the inter-American system. One is disturbed, on the other hand, by the seemingly uncritical echo of the Mercantilist doctrine that industrial trading nations are inherently economic adversaries; in the concluding chapter the author reports that because of the war the people of the United States had "realized their dream of excluding dangerous European and Asiatic rivals from Latin America." The events of 1942 show many positive achievements toward inter-American understanding and solidarity resulting from the January Meeting of Foreign Ministers of the American Republics at Rio de Janeiro. The book contains a valuable chronology of events; the index is excellent, contributing materially to its value as a source book and reference work. The statistical appendix has been expanded, but, although it contains a number of valuable tables, no clear-cut pattern of objectives appears to have been followed in their selection.

DAVID LYNCH

Washington, D.C.

*Standard Practice in Municipal Accounting and Financial Procedure.* Accounting Publication No. 10 of the Municipal Finance Officers Association (Chicago: 1943. Pp. 26. \$.50.)

With this tenth publication in its series devoted to the improvement of the accounting and the financial administration of municipalities, the Municipal Finance Officers Association makes another very useful addition to the literature in the field. The pamphlet makes no endeavor to introduce new thoughts, but sets forth principles and procedures of municipal accounting and finance in the form of briefly stated rules, recommendations, and suggestions.

The publication is intended as a check list of the essentials of sound accounting and financial procedures for municipal administrators. It not only will serve admirably in that avowed purpose, but it also can be used by interested students and practicing accountants as an outline of the things relating to municipal government finances about which they should become informed. And where a municipal accounting system needs thorough revision, one can think of no better guide.

The work may be regarded as authoritative. The committee which prepared the pamphlet consisted of men of considerable repute in the government field. The recommendations of the National Committee on Municipal Accounting, where they apply, are followed. On the whole, it is a concise statement of what appears to be the best opinion on the subject matter today.

The essentials are listed in numbered sequence under eight main headings which reveal the scope of work, viz:

- I Accounting and Treasury Duties
- II Budgeting
- III The Accounting System
- IV Accounting Procedure
- V Financial Reports
- VI Municipal Cost Accounting
- VII Accounting for Municipal Utilities
- VIII Independent Post-Auditing

To crowd the suggested essentials of so many phases of government accounting and administration into a twenty-six page pamphlet required not only small print but very concise statements. There was little room for elaboration, and where elaboration was crowded in, it was occasionally not well done . . . as when the double-entry basis of accounting was uninformatively described with the single sentence, "Under this system an entry to the debit side of an account or accounts is offset by a corresponding entry to the credit side of an account or accounts."

The work is so comprehensive in its limited pages that the informed reader is almost certain to find an occasional omission or inaccuracy, especially because this is a first edition. It is therefore with some hesitation and with insistence that they do not detract particularly from the value of the publication, that this reviewer dutifully calls attention to some desirable corrections and improvements.

The accounting and treasury duties are listed together without an attempt to differentiate between them. A clear-cut separation is desirable from the internal check standpoint. One of the criticisms of county administration in the State of Washington at this time is that the duties of the accounting and treasury departments are not satisfactorily divided, with a consequent inability to control properly the collection of taxes.

At times it appears that the rules or recommendations are made in too positive a tone, without proper qualification. On page 3, the statement is made that "total estimated expenditures should not be greater than the revenues estimated to be available for financing them." Tell that to the Federal Government! But even for municipalities, this fails to take into account capital expenditures which are very properly made from borrowed money. On page 12, we find that "depositories should be required to pay interest on public deposits when and where state and national laws permit it." Perhaps more than legal permission is required these days to wring out of banks interest on demand deposits. And on page 20 we are informed that tables showing tax data should cover a ten-year period, no more no less, without a reason being given why that particular length of time should be used.

On the other hand, a check list should have all its points clear-cut and easily understood if they are to serve as a guide. Some of the recommendations in this list do not satisfy that requirement. For example, a confusion of individual funds with types of funds on page 11 makes it difficult to determine just what is expected. Again, the description of the accounting records (and particularly the books of final entry) on pages 7-9 is somewhat confusing because it is not pointed out here or prior to this point that each fund requires separate accounting and hence separate records to some extent.

These criticisms are relatively inconsequential, however. The check list will certainly be found very useful, for it is always helpful to have an authority prescribe a set of rules or standards by which to check oneself. There is a danger, of course, that the suggestions will be accepted too literally, especially when made in a positive manner without elaboration or qualification, as these tend to be, and thus not be adapted properly to existing

conditions. But with the accounting for most municipalities still being in need of considerable improvement, we need not worry about an over-zealous application of rules of procedure. Rather should we be concerned with having municipal officials recognize the merits of this publication and make good use of it.

ARTHUR N. LORIG

University of Washington

*State Accounting Procedures.* Fladger F. Tannery. (Chicago: Public Administration Service, 1943. Pp. xxii, 442. \$5.00.)

Although there has been an increasing amount of attention given to municipal accounting in the past decade, little has been done in any organized fashion on the subject of accounting for state governments. This has probably been true partly because the number of state governmental units is necessarily limited in comparison with the number of municipalities. It has always been the contention of your reviewer that education in understanding the needs and benefits derived from proper accounting systems for governmental units is of prime importance. A great deal of pressure must come from the individual citizen before much improvement can be expected. This pressure will not be forthcoming, however, until those who understand governmental accounting have been able to make it apparent to officials and private citizens as well that governmental units can and should be operated with as much efficiency as any private business. It is well recognized that the accounting system in any unit, private or governmental, plays an enormous part in the efficient operation of that unit.

This work by Dr. Tannery is an excellent treatise on state accounting from many points of view. The accountant will find it a helpful guide in installing and auditing state accounts; governmental officials will find it invaluable if they follow through on its recommendations; and the layman can find parts of it enlightening to him in respect to what a good system of accounts for his state should show him.

Close attention has been paid to the principles set up by the National Committee on Municipal Accounting. That these principles apply so readily to state accounting has two important implications. In the first place, the principles set up by the National Committee must be quite fundamental, applying not only to municipal accounting but to other types of governmental accounting as well. In the second place, the fitting of these principles to state accounting by Dr. Tannery is commendable and sound. The work is by no means only theoretical. The author has applied some of the principles in Texas, Rhode Island, and Massachusetts wherein he has been able to test them and to determine their practicability.

The book is divided into fourteen chapters with a general organization that makes reference very simple. The first chapter called "The Accounting Function" is introductory in nature, setting forth objectives, principles, classification, and other appropriate items.

"State Fund Structure and General Ledger Accounts" points out funds that would be used by most

state units, showing how each would be opened, what its normal purpose is, and how the budgetary figures are entered in the fund. The general ledger form receives brief attention near the end of the chapter.

Chapter III is devoted to budgetary accounts. Those familiar with governmental accounting will recognize an entirely orthodox method of treating the various items involving estimates; items which are extremely important from the point of view of the user of such records.

Revenues and cash receipts are defined and classified in the fourth chapter, with attention being given to the entries for such items. This is followed by a comparable treatment of expenditures and cash disbursements in Chapter V. Encumbrances are given ample treatment. The importance of placing these items in the permanent records is shown with illustrative entries.

A chapter each is devoted to "General Fixed Assets and Property Controls" and "Investments." Proper controls and detailed procedures are discussed. The use of bond tables and formulas is treated adequately in the latter chapter. Other Current Assets are discussed briefly in Chapter VIII.

Chapter IX is devoted to liabilities with emphasis on bonds. All phases of their treatment are discussed from authorization to retirement. Sinking fund requirements are not ignored. The accepted treatment of other liabilities is given attention in the last few pages of the chapter.

A short chapter is then devoted to the closing of the budgetary and operating accounts at the end of the fiscal period. Application of this procedure is indicated for all funds. This is followed by a chapter giving attention to financial statements and reports with a considerable amount of good illustrative material.

The accounts of the treasury are treated in Chapter XII. These accounts for the state, as for other governmental units, are comparatively simple. Departmental accounts are discussed in the next chapter and the text material closes with a discussion of the post-audit in Chapter XIV. This chapter gives a brief description of the methods of auditing the usual items found in such a system of accounts.

The book as a whole is logical, well organized, and copiously illustrated. As well as for the groups mentioned earlier, this will be found an excellent reference book by the teacher of governmental accounting. It would serve as a text for state accounting except for the fact that it does not contain problem material. This, however, was not the intended purpose of the work.

ROBT. P. HACKETT

University of Illinois

*Mathematics of Business and Finance.* W. Ben Dyess and Robert O. Gilmore. Including Compound Interest and Annuity Tables. F. C. Kent and M. E. Kent., (New York, McGraw-Hill Book Company, Inc. 1942. \$3.50.)

This textbook is designed for a one-year combined course in the mathematics of business, those topics in algebra which are needed for the development of the interest and annuity formulas, and the theory and use of logarithms. The usual topics in the mathematics of in-

vestment are covered. There are chapters on simple interest and discount, compound interest, annuities, bonds, sinking funds and amortization, and life insurance. The remaining chapters are on the fundamentals of arithmetic, the fundamentals of algebra, logarithms, and graphic representation. Algebra is introduced purely as a necessary tool, and the topics are inserted as needed for further development of formulas in the mathematics of business. The result is that the book loses in continuity of subject matter. It also underestimates the average student's interest and ability in algebra. In this part of the text there are several misstatements. For example on page 20 it is stated that the basic laws of addition are provable.

The presentation on the whole is good, and there are numerous illustrative examples worked out in great detail as a guide for the student. But the number of problems to be worked is surprisingly small; there are not nearly enough of them to give a student the necessary proficiency in setting up formulas and reading tables.

The text includes the Kent and Kent interest and annuity tables. These are excellent tables. The entries are given to ten decimal places, and the range for both the interest rate and number of periods is much larger than those found in the usual textbooks.

GLADYS GIBBENS

University of Minnesota

*CPA Law Questions and Answers, 1935-41.* John C. Teevan. (New York: The Ronald Press Company, 1942. \$4.00.)

The present volume of C.P.A. Law Questions and Answers brings up to date the author's previous work with law questions propounded by the Board of Examiners of the American Institute of Accountants. The volume is the third of a series and makes available, in convenient loose-leaf form, the law examinations of the Institute, accompanied by model answers, for the period from June, 1917, to November, 1941. Since the states using Institute examinations now number forty-two, a very large group of students can rely upon the material as a guide to preparation for their respective state examinations. In those states where local boards prepare their own questions the work will be useful for its compilation of uniform laws and the suggestions which it contains on procedure for answering law questions. The latter material should prove particularly useful to the many students who, although they may have a fair grasp of substantive principles of law, fail to make a good showing at examination time by reason of a lack of technique in presenting their knowledge to the examiner. The author has included, along with his own observations on the matter of presentation, material prepared by the Institute and first published in the *Journal of Accountancy* (Vol. 65 (1938), pp. 232-237) under the title "Suggestions to Candidates for Commercial Law Examinations." Suggestions contained in *Balantine's Problems in Law* (2nd edition (1937), pp. 1-7) have also been included.

The introductory material might have been made measurably more valuable to many students by the addition of a section on the reasoning process. While the

review period prior to taking an examination is hardly the appropriate time to grapple with logical method for the first time, many examinees would, I am sure, profit from a restatement of the reasoning process with which they are tacitly assumed to be familiar. I think it would have been worth while to review the nature of the syllogism and its use in solving legal problems. While many (and sometimes almost all) of the questions in the examinations reprinted here tend to require "capsule" information, there are usually included a number of problems which require a reasoned answer and in which consciously or not, a conclusion must be reached through the use of major and minor premises. If consciously applied by the student, advantage will obviously accrue from the use of logical form in the nicer delineation which results between discussion of facts and discussion of rules of law. That is to say, the student who proceeds logically accords the status of major premises to the legal principles which he has learned and treats the patterns of conduct which they contain as logical middle terms. Greater coherency of reasoning results in that discussion of the applicable law is identified in the mind of the student with selection of a major premise. As a corollary, the student's discussion of facts centers in a minor premise in which he seeks to identify or differentiate the facts in his case with or from the pattern of conduct postulated in the major premise.

The model answers contain a few instances in which the writer runs afoul of his own admonitions against circumlocutiousness and groping for an answer. For example, in Question 9 of the November, 1936 examination the legal principles governing the case are stated at the end of the answer after being preceded by discussion as to whether the facts given do or do not come within such principles. Logic would seem to have required a statement of the applicable principles at the outset.

M. G. DAKIN

Philadelphia

*Advanced Accounting.* Howard S. Noble, Wilbert E. Karrenbrock, and Harvey Simons. (Chicago: South-Western Publishing Company, 1941. Pp. xii, 846. \$4.50.)

This book is designed to fill the requirements of a second year accounting course of the type found in most colleges and universities. While it is one in a series of texts, the first book being *Accounting Principles*, by McKinsey and Noble, it can be used independently of the series. The organization of the material is such that an instructor can easily stress or omit topics to conform with the time limits of the course and his personal desires.

The book is divided naturally into three parts. The first part recognizes the need of a comprehensive review of elementary accounting before proceeding with the advanced problems. The first two chapters present a complete review of the first year's work and the review is continued in the third chapter which discusses the problems involved in the construction of statements from incomplete data.

The second part is the series of chapters in which the

problems of valuation and the technical procedures dealing with the specific assets, liabilities and net worth are discussed. The usual sequence is followed with chapters on cash and receivables, inventories, investments, fixed assets, intangible assets and deferred charges, liabilities, capital stock, and surplus.

The third part is a consideration of advanced and technical procedures encountered in general practice. Some of the topics covered are instalment sales, cost accounting, statement of application of funds, partnerships, consignments, and consolidated statements. The last three chapters are on actuarial science with a step by step development of the principles and a demonstration of some of the applications.

In the writing of a book of this type the authors must choose to follow some path between two extremes; one extreme being a rather dogmatic and practical consideration of a great many topics and problems which might be included in an advanced book and the other extreme being a more limited scope for the book with a very detailed discussion of all theoretical and practical aspects of each topic. The authors of this book were successful in finding the middle path. The number of topics is sufficiently limited so that some of the theoretical questions may be considered, yet it includes all of the subjects which most instructors would desire to include at this stage of the curriculum.

From chapter to chapter there are shifts in emphasis between theory and mechanics. In the chapter on inventories there is a distinct emphasis upon the mechanical procedures and scarcely a mention of the advantages and disadvantages of each method and no statement of the applicability of the methods to types of businesses. To the reviewer, the valuation of inventory at "cost or replacement cost whichever is lower" is treated inadequately with an example and the statement that this method "is in agreement with the conservative principle of anticipating no profits and providing for all losses in the financial statements." In the chapter on cost accounting the theory of distributing service department costs to production departments on a double basis and the theory of normal overhead are adequately and neatly discussed in a satisfying manner often not found in cost accounting texts.

In working out the example on process costs on page 126, the authors assumed that materials were added uniformly throughout the process. Failure to state that assumption might mislead some students.

The text is quite readable and the boldface sub-headings aid the reader in following the outline. There are a great many examples and illustrations, all of them carefully and completely worked out in detail. Wherever the example is a series of transactions and accompanying journal entries, the two series are arranged in parallel columns, each transaction beside the journal entry for it. This arrangement greatly facilitates reading. Wherever there is a series of illustrations, e.g., consolidated statements, they are well coordinated. The ample number of questions and problems at the end of each chapter should aid in making this text very teachable.

WM. E. THOMAS

University of Cincinnati

# ASSOCIATION REPORTS

## REPRESENTATIVE COLLEGE PROGRAMS

(Continued from October)

### UNIVERSITY OF ARKANSAS

#### First Semester

English Composition  
History  
Algebra  
Chemistry  
Economics

#### Third Semester

Principles of Economics  
Accounting Principles  
Business Statistics  
Economic Botany  
English Composition  
Elementary Typing

#### Fifth Semester

Intermediate Accounting  
Cost Accounting  
Financial Organization  
Commercial Law  
Public Finance  
Principles of Marketing

#### Seventh Semester

Corporation Finance  
Federal Income Tax  
Commercial Law  
History of Economic Thought  
Labor Problems  
Business and Finance Seminar

#### First Semester

Elementary Accounting Theory  
Economic Organization of Society  
English Composition  
Mathematics  
Elements of Science

#### Third Semester

Advanced Accounting Theory  
Constructive Accounting  
Principles of Economics  
Commercial Correspondence  
General Psychology  
Elementary Spanish

#### Fifth Semester

Intermediate Accounting Problems  
Cost Accounting  
Public Speaking  
Modern Drama  
Money and Banking  
Investments  
General Commercial Law  
Vocational Planning

#### Seventh Semester

Auditing  
Income Taxation  
Advanced Accounting Problems  
General Literature  
Laws of Business Organizations  
Sociology  
Vocational Problems

#### Second Semester

History  
English Composition  
Botany  
Mathematics of Finance  
Economics

#### Fourth Semester

American Government  
Economic History of the U. S.  
General Psychology  
Accounting Principles  
Principles of Economics  
Elementary Typing

#### Sixth Semester

Commercial Banking  
Commercial Law  
Intermediate Accounting  
Auditing  
Transportation  
Industrial Management

#### Eighth Semester

Accounting Systems  
CPA Problems  
Business Forecasting  
Investments

### BOSTON UNIVERSITY

#### Second Semester

Elementary Accounting Theory  
Economic and Industrial History  
English Composition  
Mathematics  
Elements of Science

#### Fourth Semester

Advanced Accounting Theory  
Constructive Accounting  
Principles of Economics  
Applied Psychology  
Elementary Spanish  
Mathematics of Accounting and Investment

#### Sixth Semester

Intermediate Accounting Problems  
Cost Accounting  
Money and Banking  
General Commercial Law  
Argumentation  
Interpretation of Business Conditions  
Vocational Planning

#### Eighth Semester

Auditing  
Income Taxation  
Advanced Accounting Problems  
General Literature  
Sociology  
American Government  
Conversational French  
Vocational Problems

*The Accounting Review*

## UNIVERSITY OF CALIFORNIA (BERKELEY)

*First Semester*

Geography (Physical Elements)  
Intermediate Algebra  
General Paleontology  
Government  
First-year Reading and Composition

*Third Semester*

Commercial Law  
Geology (Dynamical and Structural)  
Elements of Economics  
Origins of Legal Institutions  
Introduction to Philosophy  
Principles of Accounting

*Fifth Semester*

Advanced Commercial Law  
Money and Credit  
Industrial Organization  
Advanced Accounting  
Contemporary Theories of Social Reform

*Seventh Semester*

Industrial Relations  
Economics of Enterprise  
Corporation Finance  
State Government

*Second Semester*

Geography (Natural and Cultural Regions)  
Mathematics of Finance  
First-year Reading and Composition  
Government  
Economic History

*Fourth Semester*

Commercial Law  
Geology (Historical)  
Elementary Physiography  
Elements of Economics  
History of Europe  
Principles of Accounting

*Sixth Semester*

Advanced Commercial Law  
Statistics  
Marketing  
Advanced Accounting  
Municipal Administration

*Eighth Semester*

Economic History of the United States  
Dynamic Economics and Business Fluctuations  
Transportation  
National Administration in the United States  
Geography of Latin America

## COLLEGE OF THE CITY OF NEW YORK

*First Semester*

American Economic Development  
Intermediate French  
History of European Civilization  
Mathematics Preparatory to Business Studies  
Vocal Expression  
Survey of Science

*Third Semester*

Principles of Accounting  
Principles of Economics  
Resources and Industries  
English Literature  
Advanced French

*Fifth Semester*

Art Appreciation  
Descriptive General Chemistry  
Principles of Business Organization  
Corporation Accounting  
Advanced Principles of Cost Accounting  
Law of Business Organization

*Seventh Semester*

Applied English Composition  
American Government and Politics  
Extemporaneous Speaking  
Advanced Auditing  
Estate Accounting  
Business Taxes  
Advanced Accounting Problems  
Essentials of Real Estate

*Second Semester*

Principles of Accounting  
Applied English Composition  
Advanced French  
History of European Civilization  
Mathematics of Finance  
Survey of Science

*Fourth Semester*

Descriptive General Chemistry  
Principles of Finance  
English Literature  
Law of Business Contracts  
Advanced Accounting  
Principles of Cost Accounting

*Sixth Semester*

History and Appreciation of Music  
Principles of Statistics  
General Psychology  
Argumentation and Debate  
Principles of Auditing  
Accounting Systems  
Analysis of Financial Statements  
Law of Negotiable Instruments

*Eighth Semester*

Journalism  
Municipal Accounting  
Budget Accounting  
Federal and New York State Income Taxes  
Financial and Operating Statements  
of Typical Industries

## Association Reports

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### UNIVERSITY OF COLORADO

#### *Autumn Quarter*

Freshman English  
Inorganic Chemistry  
College Chemistry  
Economic History of England

Exposition and Argumentation  
Principles of Economics  
Psychology  
Accounting

Business Statistics  
Business Law  
Intermediate Accounting  
Principles of Marketing  
Income Tax Accounting

Public Utilities  
Accounting Systems  
Governmental Accounting

#### *First Year*

#### *Winter Quarter*

Freshman English  
Inorganic Chemistry  
Trigonometry  
Economic History of U. S.  
Religion and Personal Living

#### *Second Year*

Exposition and Argumentation  
Principles of Economics  
Psychology  
Accounting  
Advertising

#### *Third Year*

Corporation Finance  
Business Law  
Commodity Markets  
Personnel Management  
Classical Mythology

#### *Fourth Year*

Corporation Finance  
Business Law  
Advanced Accounting Theory  
Psychology of Language

#### *Spring Quarter*

Freshman English  
Inorganic Chemistry  
Economic History of U. S.  
Religion and Social Living

Exposition and Argumentation  
Mathematics of Life Insurance  
Principles of Economics  
Educational Psychology  
Psychology of Business Relations  
Accounting

Geography of North America  
Cost Accounting  
Theory of Business Organization  
Ancient History

History of England  
Auditing  
Advanced Accounting Problems  
Budgets and Accounting Control  
Fiction

### COLUMBIA UNIVERSITY (In the General College)

#### *First Semester*

European Literature and Philosophy  
Contemporary Civilization in the West  
Matter, Energy and Direction  
Intermediate German  
German Readings in Modern Prose  
English Composition

#### *Third Semester*

Fine Arts and Music  
Contemporary Economic and Political Problems  
of the U. S.  
Economic Geography  
English and American Contemporary Writers  
English Composition  
Trigonometry

#### *Fifth Semester*

Business Law for Accountants  
First Year Accounting  
Banking and Business  
Public Finance  
Economic Analysis  
Elements of Marketing

#### *Seventh Semester*

Cost Accounting  
Auditing Theory and Practice  
Commercial Bank Lending  
Economic Forces Influencing Business  
Activity  
Business Law  
Federal Income Tax Procedure  
Investments

#### *Second Semester*

European Literature and Philosophy  
Contemporary Civilization in the West  
English Composition  
Chemical Changes in Matter

#### *Fourth Semester*

Fine Arts and Music  
Contemporary Economic and Political Problems  
of the U. S.  
Economic Geography  
English and American Contemporary Writers  
Literary Tendencies since 1900  
Solid Geometry

### (In the Business School)

#### *Sixth Semester*

Business Law for Accountants  
Second Year Accounting  
Corporation Finance  
Business Statistics  
Banking and Business

#### *Eighth Semester*

Cost Accounting  
Auditing Theory and Practice  
Economic Forces Influencing Business Activity  
Accounting Systems  
Advanced Problems in Income Tax

*The Accounting Review*

## UNIVERSITY OF DENVER

*First Year**Winter Quarter*

Effective Writing  
Fundamental Legal Concepts  
Accounting

*Spring Quarter*

Business Correspondence  
Agency, Torts, Partnerships  
Analysis of Financial Statements  
Economic History of the U. S.

*Autumn Quarter*

Grammar and Composition  
Business Calculations  
Accounting

*Second Year*

Economic Principles  
Fundamentals of Speech  
Law in Relation to the Market  
Advanced Accounting Theory

Advanced Principles and Problems  
of Economics  
Techniques of Public Discussion  
Mathematical Theory of Investment  
Cost Analysis and Procedures

Economic Resources  
Business Organization and Management  
Negotiable Instruments  
Advanced Accounting Theory

*Third Year*

Business Finance  
Statistics  
Accounting Systems

Investments  
Statistics  
Law of Corporate Organization  
and Management  
Income Tax

Money and Banking  
Statistics  
Accounting Systems

*Fourth Year*

National Socialism and World  
Trade  
Personality in Business  
Government and Business  
CPA Seminar

Economic Planning  
Psychology Applied to Current  
Business Problems  
Careers in Government Service  
CPA Seminar

Economic Geography and World  
Politics  
Social Behavior  
Governmental Revenues and Expenditures  
Auditing and Reports

## UNIVERSITY OF FLORIDA

(In the General College)

*First Semester*

Man in the Physical World  
Man in the Social World  
Reading, Speaking, Writing  
Man and his Thinking

*Second Semester*

Man in the Physical World  
Man in the Social World  
Reading, Speaking, Writing  
General Mathematics

*Third Semester*

The Humanities  
General Biology  
Elementary Economics  
Elementary Accounting

*Fourth Semester*

The Humanities  
General Biology  
Elementary Statistics  
Elementary Accounting

(In the College of Commerce)

*Fifth Semester*

Public Finance  
Money and Banking  
Principles of Marketing  
Business Law  
Accounting Principles

*Sixth Semester*

Principles of Transportation  
Money and Banking  
Business Law  
Cost Accounting  
Accounting Principles

*Seventh Semester*

Economic Principles  
Corporation Finance  
Business Law  
Advanced Accounting Problems  
Accounting System Construction  
Governmental Accounting

*Eighth Semester*

Economic Principles  
Corporation Finance  
Investments  
Advanced Accounting Problems  
Federal Income Taxation  
Auditing Principles

## Association Reports

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### UNIVERSITY OF IOWA

#### *First Semester*

Freshmen Lectures  
Principles of Speech  
Literature and the Art of Writing  
Spanish  
American Government  
General Science

#### *Third Semester*

Principles of Accounting  
Principles of Economics  
Political Parties  
General Science  
Spanish  
Literature and the Art of Writing

#### *Fifth Semester*

Business Organization  
Money and Banking  
Economic Resources  
Business Law  
Intermediate Accounting  
Industrial Management

#### *Seventh Semester*

Factory Cost Accounting  
Marketing  
Advanced Accounting  
Tax Accounting  
History of Modern Europe

#### *Second Semester*

Principles of Speech  
Literature and the Art of Writing  
Spanish  
American Government  
General Science

#### *Fourth Semester*

Principles of Accounting  
Principles of Economics  
Political Parties  
General Science  
Spanish  
Literature and the Art of Writing

#### *Sixth Semester*

Corporation Finance  
Money and Banking  
Intermediate Accounting  
Business Law  
Labor Economics

#### *Eighth Semester*

History of Modern Europe  
CPA Problems  
Accounting Systems  
Auditing

### UNIVERSITY OF MINNESOTA

#### *First Year*

##### *Winter Quarter*

Freshman Composition  
Freshman Literature  
Elements of Money and Banking  
Mathematics of Investment

##### *Second Year*

Principles of Economics  
General Psychology  
Political Science  
Principles of Accounting

##### *Third Year*

Business Law  
Accounting Practice and Procedure  
Corporation Finance  
Personnel Management  
Cost Accounting Laboratory  
Accounting Laboratory

##### *Fourth Year*

Advanced General Economics  
Business Cycles  
Income Tax Accounting  
Budgeting  
Labor Problems

##### *Spring Quarter*

Freshman Composition  
Freshman Literature  
Introduction to Sociology  
Elements of Statistics

Applied Psychology  
Political Science  
Principles of Accounting  
Trigonometry

Business Law  
Accounting Practice and Procedure  
Tabulating Equipment Laboratory  
Cost Accounting  
Advanced Money and Banking  
Accounting Laboratory

Cost Methods  
Public Utilities  
Governmental Accounting  
Internal Auditing  
Government Regulation of Business

#### *Fall Quarter*

Freshman Composition  
Freshman Literature  
Introduction to Economics  
Commerce Algebra

Principles of Economics  
General Psychology  
Political Science  
Elements of Accounting  
Sociology

Business Law  
Production Management  
Public Finance  
Cost Accounting  
Marketing

Auditing and Public Accounting  
Business Statistics  
Life Insurance  
Advanced General Economics  
Transportation  
Auditing Laboratory

*The Accounting Review*

## UNIVERSITY OF NORTH CAROLINA

*First Semester*

English Composition  
Mathematical Analysis  
French  
Natural Science  
History of Western Civilization

*Third Semester*

Principles of Economics  
Resources and Industries  
Introduction to Business Administration  
General Psychology  
American Federal Government  
Survey of English Literature  
Physical Science

*Fifth Semester*

Principles of Accounting  
Accounting Laboratory  
Money and Banking  
Principles of Statistics  
Statistics Laboratory  
Corporation Finance  
Public Finance  
Public Administration  
American History  
Production Management

*Seventh Semester*

Advanced Accounting Theory  
Cost Accounting  
Auditing  
Income Tax Procedure  
Governmental Accounting  
Business Law  
Government and Business  
Municipal Government

*Second Semester*

English Composition  
Mathematical Analysis  
French  
Natural Science  
History of Western Civilization

*Fourth Semester*

Principles of Economics  
Resources and Industries  
Introduction to Business Administration  
General Psychology  
American Federal Government  
Survey of English Literature  
Physical Science

*Sixth Semester*

Principles of Accounting  
Accounting Laboratory  
Money and Banking  
Principles of Statistics  
Statistics Laboratory  
Corporation Finance  
Public Finance  
Public Administration  
American History  
Production Management

*Eighth Semester*

Advanced Accounting Theory  
Cost Accounting  
Auditing  
Income Tax Procedure  
Governmental Accounting  
Business Law  
Government and Business  
Municipal Government

## NORTHWESTERN UNIVERSITY

(In the General College)

*First Semester*

English  
Zoology  
Spanish  
Economics

*Third Semester*

Spanish  
Accounting  
Philosophy  
Psychology

*Fifth Semester*

Accounting  
Income Tax  
Law of Sales  
Statistics  
Money and Banking

*Seventh Semester*

Cost Accounting  
Advanced Accounting  
Accounting (Special Industries)  
General Tax Accounting  
Law of Property  
Industrial Organization and Management  
Writing for Business

*Second Semester*

English  
Zoology  
Spanish  
Economics

*Fourth Semester*

Spanish  
Accounting  
Political Science  
Business Psychology

(In the College of Commerce)

*Sixth Semester*

Law of Contracts  
Auditing  
Principles of Marketing  
Corporation Finance

*Eighth Semester*

Advanced Auditing  
Federal Tax Problems  
Municipal Accounting  
Mathematics for Accountants  
Business Letter Writing  
Business and Government

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### THE OHIO STATE UNIVERSITY

#### First Year

##### Winter Quarter

Introduction to Business  
General Geology  
Spanish

##### Spring Quarter

Introduction to Literature  
Economic Geography  
Spanish

#### Autumn Quarter

Development of Modern Economic  
Society  
General Geology<sup>1</sup>  
Principles of Geography

#### Second Year

Elements of Accounting  
Principles of Economics  
General Psychology

Intermediate Accounting  
History  
Principles of Effective  
Speaking

Elements of Accounting  
Principles of Economics  
General Psychology

#### Third Year

Cost Accounting  
Corporation Finance  
Statistics  
Political Science

Cost Accounting  
Income Tax Accounting  
Analysis of Financial  
Statements  
Marketing  
Political Science

Advanced Principles of Accounting  
Money and Banking  
Law of Contracts  
History

#### Fourth Year

Auditing  
CPA Problems  
Industrial Organization and Man-  
agement  
Public Aspects of Industry  
Introduction to Philosophy

System Design  
Law of Negotiable Instruments  
Public Finance  
Business Communications  
Governmental Agencies and Busi-  
ness

Auditing  
CPA Problems  
Partnership and Corporation Law  
Public Finance  
Introduction to Philosophy

### SOUTHERN METHODIST UNIVERSITY

#### First Semester

English Composition  
Social Science  
College Algebra  
Elementary Spanish  
Elementary Physics

#### Second Semester

English Composition  
Social Science  
Trigonometry  
Elementary Spanish  
Elementary Physics

#### Third Semester

Elementary Accounting  
Principles of Economics  
Survey of English Literature  
Religion (Old Testament)  
Intermediate Spanish

#### Fourth Semester

Elementary Accounting  
Principles of Economics  
Survey of English Literature  
Religion (New Testament)  
Intermediate Spanish

#### Fifth Semester

Intermediate Accounting  
Business Statistics  
Business Organization  
Cost Accounting  
Money and Banking

#### Sixth Semester

Intermediate Accounting  
Business Statistics  
Business Organization  
Income Tax Procedure  
Money and Banking

#### Seventh Semester

Advanced Accounting  
Auditing Procedure  
CPA Review  
Commercial Law  
Industrial Statistics

#### Eighth Semester

Advanced Accounting  
Auditing Procedure  
CPA Review  
Commercial Law  
Public Finance

## SYRACUSE UNIVERSITY

*First Semester*

Freshman English  
Principles of Economics  
Money and Banking  
Introductory Business Mathematics  
American Government and Politics

*Third Semester*

First-Year Accounting  
Business English  
Elementary French  
Public Finance and Taxation  
Investments  
Money, Credit, and Prices

*Fifth Semester*

Advanced French  
Second-Year Accounting  
Cost Accounting  
Accounting Systems  
Business Law  
Business Organization

*Seventh Semester*

Auditing  
Accounting Problems  
Accounting Seminar and Research  
Advanced Business Law  
Research in Public Finance  
American Political Concepts

*Second Semester*

Freshman English  
Principles of Economics  
Elements of Accounting  
Mathematics of Investment  
American Government and Politics

*Fourth Semester*

First-Year Accounting  
Business English  
Elementary French  
Consumption of Wealth  
Investment Banking  
Elements of Astronomy

*Sixth Semester*

Advanced French  
Second-Year Accounting  
Cost Accounting  
Accounting Systems  
Business Law  
General Insurance

*Eighth Semester*

Auditing  
Accounting Problems  
Accounting Seminar  
Income Tax Accounting  
Government and Economic Life

## TEMPLE UNIVERSITY

*First Semester*

Principles of Accounting  
Principles of Economics  
Introduction to College Algebra  
English Composition  
Modern World History

*Third Semester*

Advanced Principles of Accounting  
Principles of Insurance  
Money and Credit  
Business Law (Contracts)  
Elements of German  
Business Writing and Reports

*Fifth Semester*

Auditing Theory  
Auditing Laboratory  
Intermediate German  
Business Law (Business Associations)  
Corporation Finance  
Elementary Business Statistics

*Seventh Semester*

Accounting Systems  
Federal and State Taxes  
Industrial Management  
Labor Problems  
Introduction to Psychology  
Business Correspondence

*Second Semester*

Principles of Accounting  
Economic Problems  
Introduction to General Mathematics  
English Composition  
Modern World History

*Fourth Semester*

Advanced Principles of Accounting  
Economics of Transportation  
Banking  
Business Law (Negotiable Instruments)  
Elements of German  
Public Speaking

*Sixth Semester*

Cost Accounting Theory  
Cost Accounting Laboratory  
Intermediate German  
Advanced Business Law  
American National Government  
Elementary Business Statistics

*Eighth Semester*

Governmental Accounting  
Federal and State Taxes  
Accounting Mathematics  
Investments  
Applied Psychology  
CPA Problems

TULANE UNIVERSITY

*First Semester*

Business Talks by Business Men  
English  
Spanish  
College Algebra  
Economic History and Geography  
Elementary Accounting

*Third Semester*

Business Talks by Business Men  
English—Business Correspondence  
Spanish  
Intermediate Accounting  
Principles of Economics  
American Government

*Fifth Semester*

Business Talks by Business Men  
Statistics  
Business Finance  
Principles of Marketing  
Elementary Cost Accounting  
History of United States

*Seventh Semester*

Business Talks by Business Men  
Labor Problems  
Commercial Law  
Production Management  
Governmental Accounting  
Philosophy of Thinking and Knowing

*Second Semester*

Business Talks by Business Men  
English  
Spanish  
Trigonometry  
Economic History and Geography  
Elementary Accounting

*Fourth Semester*

Business Talks by Business Men  
Business Reports  
Spanish  
Intermediate Accounting  
Principles of Economics  
American Government

*Sixth Semester*

Business Talks by Business Men  
Statistics  
Business Finance  
Income Tax Accounting  
Advanced Cost Accounting  
History of United States

*Eighth Semester*

Business Talks by Business Men  
Investments  
Commercial Law  
Auditing  
Advanced Accounting Principles  
Philosophy of Thinking and Knowing

WASHINGTON AND LEE UNIVERSITY

*First Semester*

English  
French  
Geology  
Mathematics  
Modern Civilization

*Third Semester*

Elementary Accounting  
Principles of Economics  
American Government  
French  
American History

*Fifth Semester*

Intermediate Accounting  
Business Law  
Marketing  
Money and Banking  
Spanish  
Inland Transportation

*Seventh Semester*

Cost Accounting  
Auditing  
Business Statistics  
Investments  
Senior Thesis

*Second Semester*

English  
French  
Geology  
Mathematics  
Modern Civilization

*Fourth Semester*

Elementary Accounting  
Principles of Economics  
American Government  
French  
American History

*Sixth Semester*

Advanced Accounting  
Business Law  
Resources and Industries  
Business Finance  
Spanish  
English

*Eighth Semester*

Taxation Accounting  
CPA Problems  
Business Statistics  
Law of Contracts  
Senior Thesis

## WASHINGTON UNIVERSITY

*First Semester*

English Composition  
College Algebra  
Geology  
American Government  
European History

*Third Semester*

English Literature  
Principles of Economics  
Principles of Accounting  
Geography  
Psychology

*Fifth Semester*

Business Administration  
Labor Problems  
Business Finance  
Business Law  
Applied Theory of Accounts

*Seventh Semester*

Accounting Systems  
Factory Cost Accounting  
Income Taxes  
Accounting Seminar  
Advanced Statistics

*First Semester*

English Composition  
Physical Geography  
German  
Algebra

*Third Semester*

Elements of Accounting  
General Economics  
English Literature  
German

*Fifth Semester*

Marketing Methods  
Corporation Finance  
Advanced Accounting Problems  
German

*Seventh Semester*

Commercial Law  
Governmental Accounting  
Budgets and Budgetary Control  
Labor Problems  
Speech

*Second Semester*

English Composition  
Trigonometry  
Geology  
American Government  
European History

*Fourth Semester*

English Literature  
Principles of Economics  
Principles of Accounting  
Geography  
Psychology

*Sixth Semester*

Marketing  
Statistics  
Money and Banking  
Business Law  
Applied Theory of Accounts

*Eighth Semester*

Auditing  
Factory Cost Accounting  
Accounting Problems  
Accounting Seminar  
Transportation

## UNIVERSITY OF WISCONSIN

*Second Semester*

English Literature  
Physical Geography  
German  
Mathematics of Investments

*Fourth Semester*

Intermediate Accounting  
Business Ethics  
Public Utilities  
Physical Geography  
German

*Sixth Semester*

Business Communications  
Industrial Management  
Business Statistics  
Cost Accounting  
Personnel Management  
German

*Eighth Semester*

Commercial Law  
Auditing  
Accounting Systems  
Public Utility Management  
Speech  
Independent Work in Accounting  
German

